

The image shows the front cover of a book. The cover is light-colored with a dark, decorative border. The border consists of a series of small, dark, circular or oval shapes arranged in a rectangular frame. In the center of the cover, the word "RECORD" is printed in a bold, serif font. The book is bound in a dark red material, visible at the top and bottom edges. The cover appears to be made of a textured material, possibly cloth or paper.



✓  
Buenos Aires - L.

begin with 19844

F. R. Fosberg

Collection Number Book #9

Nos. 19844 - 20613

Jan. 26 - July 18, 1943

Colombia

(2 nos. Virginia)

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Collection and Field Book

No. 9

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COLOMBIA

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Collection and Field Book

2.

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etc.

white.

white.

leaves

not

not



2/1943-Colombia

✓ Jan. 26 - Hobo, along Quebrada del Hobo, valley of Rio Magdalena, Huila  
moist bottom land 675 m.  
along road

19844 Boneria

45 Boneria

✓ Jan. 26 - Valley of Rio Magdalena,  
road from Campoalegre to Hobo, Mun.  
de Campoalegre just n. of boundary  
of Mun. de Hobo. Huila  
weedy roadside, somewhat grazed. 620 m.

46

47 Boneria

48 Boneria

✓ Jan. 27 - Quebrada Cuandinosa,  
above Gigante, near confluence  
of Quebrada Aguablanca and  
q. Chonta, Mun. de Gigante, Huila  
Thicket of second growth 1100 m.  
woods along trail.

49

Tournefortia

✓ Jan. 27 - ~~Ridge bet~~ near foot  
of ridge between Quebrada  
Aguablanca and Quebrada Chonta,  
above Quebrada Cuandinosa, Mun.  
de Gigante, Huila 1100 m.  
bare hillside, but with a few  
small trees along trail.

50

Dioscorea

Huila

3

erect, fls. white.

weak, ascending, fls. white.

fls. white

erect, fls. white.

ascending or erect, fls. white.

scandent shrub, fls. white

vine climbing in trees, leaves  
glossy, fruiting inflorescences  
pendent, fruits triolate, not  
quite mature.



19851

Vismia

✓ Jan. 27 <sup>Finca</sup> - Miravalles, on ridge  
bet. Quebrada Aguablanca and  
Quebrada Chonta, Mun. de Gigante,  
Huila 1850 m.

52 *Callitriche deflexa* var. *subsessilis* Tassett (anal)  
abundant, covering muddy ground  
in yard.

53 *Melastoma*  
abundant in thick woods above finca

✓ Jan. 28 - Above Finca Miravalles,  
ridge bet. the Rio Blanco drainage  
and the Quebrada Cuandivosa drainage,  
Mun. de Gigante near border of Mun.  
de Algeciras, Huila  
thick wet woods. 2000 m.

54 *Cinchona officinalis* <sup>sp. nov.</sup>  
small patch or "mancha" of trees  
said to have been planted many  
years ago from sucker sprouts of  
trees that had been cut down.

55 *Rubus*

small tree 6 m. tall, leaves  
copper-brown beneath,  
lates red, flowers brownish-  
white, fruit immature

det.  
HCF.

prostrate forming a close mat,  
fruits minute, green. "berro"  
<sup>with other plants and</sup>  
infusion good for liver. infusion  
made with corn silk and Equisetum  
- for liver

small tree, <sup>corolla</sup> ~~flower~~ deep  
crimson, with cream colored  
stamens, corolla fades to  
light magenta, calyx  
and ovary deep purple-black.  
"chilca"

Anal. Ballis:

B + C 1.7%  
Ci 0.8%  
Qui 2.0%  
TC 2.5%

tree 10 m. tall, 10 cm. thick, leaves  
dark green, glossy above, midrib  
and petiole reddish, thinly <sup>fruit</sup>  
coriaceous, stipules becoming <sup>immature</sup>  
red in age. (bark sample -) "guina tuna"  
small tree 5 m. tall, dry fruits  
below leafy twigs.



19856

14 57

*Ladenbergia undulata*  
abundant

58

on tree trunks

59

*Trichomanes*

on deep humus on ground, very abundant.

12 60

*Cinchona officinalis* & *pitayensis*  
abundant in "manchali" patches,  
said to have been planted  
many years ago from sucker  
sprouts of trees cut down.

3 61

comp.

4 62

*Blechnum*  
common

63

*Blechnum*

64

*Lycopodium obscurum*

65

*Asplenium*

on mossy, decaying fallen tree-trunk  
only 4 plants seen, 3 in a clump.

7 66

*Asplenium*  
in humus

67

*Polypodium*

in humus and on mossy log

68

*Trichomanes*

climbing on tree trunks, ~~fronds pendent~~, abundant

shrub, fls. white

Anal. Bellis:

not more

than traces  
of cinchona  
alkaloids.

tree 15 m. tall, fls. white  
very fragrant. (bark sample)  
other trees much larger.  
"ojancho" wood very  
hard, much used.

scape pendent, fls. brown,  
sepals with cross bands  
of yellow, lip yellow.  
erect, arching.

Anal. Bellis

Q. + C 1.3  
Ci 0.5  
Gui 2.5  
TC 2.3

tree 12 m. tall, 15 cm. thick,  
bushy at top, leaves  
rather glossy above,  
fruit immature (bark sample)  
"guina tuna"

vine, fls. white

rhizome rather short,  
in loose humus, fronds  
ascending.

sterile plant, apparently  
same as #19862, but stipe  
much more scaly.

square stemmed, hollow stemmed  
shrub, 5 m. tall, buds only.  
erect, blade reflexed, spikes  
erect. stipe fleshy, blade  
somewhat so, roots fleshy.  
fronds arching

rhizome <sup>pale</sup> glaucous green.

fronds pendent



19869

on mossy tree trunk, near base

70

on thick humus

71

*Palicourea*

edge of clearing, common.

72

on humus and decaying logs

73

*Hydrocotyle*

bases of old stumps in clearing

74

*Palicourea*

edge of clearing

75

*Cinchona pubescens*isolated tree on top of hill otherwise  
cleared and in pasture, at  
slightly higher alt. than nearby  
*C. officinalis*.

76

thicket in second growth along trail

77

*Tournefortia*

78

Jan. 28 - Below Finca Miravalles,  
on ridge bet. Quebrada Aguablanca  
and Quebrada Chonta, Mun. de  
Gigante, Huila

1700 m.

79

*Cinchona pubescens*

remnants of forest along ridge

leaves fleshy coriaceous,  
fls. greenish & yellowish.  
fls. whitesmall tree 5 m. tall, thyrse  
red-purple, corolla blue  
outside, lobes green. <sup>24 = 19874</sup> for fruit

creeping

small tree 6 m. tall, fruit  
blue-black when mature  
see #19871 for fls.

Anal. Bellis:

g.c. 1.0%

ci 1.2%

qui tr

TC 2.2%

tree 15 m. tall, 3 dm. thick  
on moss & bark sample (?) bark  
rough, thick. leaf veins  
red, stipules small, strongly  
reflexed from the first.~~tree~~ tangled herb or  
subfruticent herb about  
2 m. tall, fls. orange  
with yellow lobes, mature  
fruit said to be 2.5 cm. in  
diameter, and edible (none seen).  
scandent shrub, fls. white.

anal. Bellis:

g.c. tr

ci 0.9%

qui tr

TC 0.7%

Tree 10 m. tall, 15 cm. thick, leaf veins  
pinkish beneath, some lvs. red, stipules  
green, erect. bark rough, corky (bark sample)



✓ Jan. 28 - Quebrada Cuandimora  
drainage, ridge bet. Quebrada  
Aguablanca and Quebrada Chonta,  
Mun. de Gigante, Huila  
woods along ridge 1500 m.  
19879 *Monina*

10 30 *Condaminea corymbosa*

✓ Jan. 28 - Quebrada Cuandimora drainage.  
lower part of ridge bet.  
Quebrada Aguablanca and  
Quebrada Chonta, Mun. de  
Gigante, Huila 1100 m.  
mostly cleared land,  
cultivated or in pasture,  
scattered trees along trail  
on ridge

12 31 *Ladenbergia magnifolia*

✓ Jan. 30 - top of first high hill on ridge  
s. of Quebrada Cascajos,

cleared country with some <sup>Huila</sup> second growth. 1900 m.

82 *Dichromena*

wet weedy place beside trail

83 *Gonzalagunia*

thickets along fence by trail

vine climbing in trees,  
fls. deep violet.  
shrub 3 m. tall, fls.  
deep purple outside, green  
within.

anal. Ballis.  
not more  
than trace  
of cinchonine  
alkaloids.

tree 15 m. tall, 2 dm. thick,  
fls. white, fragrant.  
(bark sample)

small tufts, involucre not white  
- heads white  
shrub 4 m. tall, arching,  
fls. white, fruit fleshy, gray



Jan. 30 - Finca Los Cedros on  
ridge s. of Quebrada Cascajosa  
2 km. s.e. of Garzon

brushy fence row bet.  
trail and pasture

Huila  
1600 m.

19834

*Viburnum*

85

camp

86

*Cinchona pubescens* Vahl  
common along trail, ~~stems~~

87

*Rubus*

88

*Cinchona pubescens* Vahl  
common along trail

89

*Erneornhiza umbellata*

90

*Cinchona pubescens* Vahl  
common along trail

Jan. 31 - above Finca Los Cedros, on ridge  
s. of Quebrada Cascajosa 9 km.  
s.e. of Garzon  
in second growth in clearing on ridge

Huila

1700 m.

91

*Blechnum*

92

small tree, 4 m. tall, fruits  
dark blue.

vine climbing in bushes,  
fls. white.

"ojancho" <sup>canchoso</sup>  
small tree, really a stump  
sprout, 4 m. tall, <sup>leaves light green beneath,</sup> veins red.

semi-scandent shrub  
3 m. tall, ripe fruit black,  
rather sweet and edible.

small tree, really a stump  
sprout, 5 m. tall, leaves  
light green beneath, veins

reddish. "ojancho" <sup>canchoso</sup> <sup>stipules</sup>  
erect, later reflexed  
woody vine climbing in  
bushes, fls. white

sterile stump sprout  
2 m. tall, leaves  
red-purple beneath, stipules  
erect, obtuse, on large  
shoot, bifid. "ojancho" <sup>canchoso</sup>

scandent shrub, fls. white, fruit brown  
fertile fronds erect, sterile  
arching, young fronds red-purple



- 19893 *Ladenbergia*  
edge of clearing, abundant
- 94 *Ladenbergia*  
edge of clearing, abundant

anal. Bellis:  
not more  
than traces  
of anethone  
alkaloids.

- Jan. 31 - Finca la Estrella, s. of  
Quebrada Cucaracha, one of the  
headwaters of Quebrada Damas,  
about 12 km. s.e. of Garzon, Huila  
Thick forest with clearings 1600 m.  
here and there.

- 95 *Drymaria cordata* (L.) Willd.  
muddy place along trail in pasture

- Jan. 31 - ridge s. of Quebrada  
Cucaracha, ~~at~~ one of the headwaters  
of Quebrada Damas, about 12 km.  
s.e. of Garzon, ridge above Finca  
la Estrella, Huila 1600-2000 m.

- 96 *Cyclanthus Caribbeus*

moist forest

- 97 *Wernmannia*

moist forest

- 98 *Bidens*

weed in clearing

- 99 fern

moist woods in deep humus

- 19900 *Polypodium*

on base of tree trunk

stump sprout from large  
stump. "ojancho blanco"  
tree 12 m. tall, 3 dm. thick,  
fls. white, fragrant, bark  
1 cm. thick, hard, warty, with  
a woody-granular layer  
(bark sample). "ojancho blanco"

prostrate, spreading, fls.  
white, petals small, bifid  
to base of blade into two  
linear-lanceolate lobes,  
fruiting pedicels viscous,  
easily detached.

1600 m. stem about 4 dm. tall, spike  
green, leaves deeply bifid  
at apex.

tree 10 m. tall, 8 cm. thick, fls. white  
rays white, disk yellow.

bluish green, veins pellucid



19901

*Dictyostegia orobanchoides* (Hook.) Niers subsp.~~*panicum purdiana* (Benth.)~~  
*Snelidula* + *Maas* det. *Maas* 1983

in moist or wet woods, deep humus

02 *Columnnea*

in recent clearing in wet forest

03 *Coniopsis*

in recent clearing in wet forest

04 *Cinchona officinalis* ~~*pleurophylla*~~recent clearing in wet forest.  
apparently a "mancha" of  
this plant was cut, as  
suckers are coming up  
abundantly.05 ~~*edge of*~~

edge of clearing in wet woods

06 *Urtica*

wet woods

07 *Polypodium granulosum* *longicaule* (Presl) Maxon

wet woods det. Schinger 1969

08 *Vaccinium*

moist woods

09 *Oreocarya*wet woods, along trail, on fallen  
tree.10 *Nertera*

on humus by trail, wet woods

Feb. 1 - below Finca la Estrella,  
on quebrada Cucaracha, ~~an offshoot~~  
of the headwaters of the  
Quebrada Damas, 12 km. S.E. of  
Garzon, Huila 1500 m.11 *Solanum*

pasture, climbing over stumps

1800-1900 m. erect, fls. white

1900 m. caespitose, erect, ~~fls.~~ leaves  
with a red ~~tip~~ patch  
at tip on under side.fls. bright butter yellow.  
vine, leaves purple  
beneath, fls. dirty white.suckers or stems sprouts  
about 3-5 dm. tall. stipules  
red.shrub 2 m. tall, fls.  
yellow-green.

erect herb to 1 m. tall,

2000 m. pendent from tree trunks.

scandent shrub.

1700 m.

stems terete, fls. bright  
yellow.prostrate, branches erect  
fls. yellow-green, fruits scarlet

vine, fls. white, fruit immature



19912

thickets near stream

13

~~Passiflora~~

wet places near stream

14

Sarcocolla

thickets near stream

15

~~Lobelia~~

thickets near stream

16

Salvia

wet places and thickets near stream  
abundant

17

Lanicula

along trail near stream

18

~~Camp.~~

along trail near stream

19

Hydrocotyle

abundantly carpeting <sup>wet</sup> ground  
in grazed places ~~near stream~~

20

Acalypha

thickets in canyon, near stream

21

Solanium

climbing over rocks in openings  
near streamherb with stinging hairs,  
petals white, enclosing  
stamens, between them  
large sac-like staminodes  
yellow with red bands  
near center.

fls. white

shrub 3 m. tall, inflorescence  
reddish brown, fls. white  
suffrutescent herb ~~to~~ 1 m.  
tall, corolla scarlet, lobes  
orange within, column  
yellow, anthers crimson.herb up to 1 m. tall,  
buds enclosed by red bracts,  
forming a pendent strobile,  
flowers scarlet.

rays white.

prostrate, forming a carpet,  
fls. white, peduncles erect.shrub 1-2 m. tall, incompletely  
dioecious, <sup>paniculate</sup> spikes pendent  
staminate ~~stems~~ ascending,  
staminate fls. white,  
pistillate with ovary green  
styles red.

vine, fls. white, fruit scarlet.



19922

*Helaginella*

shaded bank

23

*Pilea*~~at~~ moist open place near stream

24

*Cinchona pubescens*:

top of steep bank beside stream

25

*Hydrocotyle*

growing on top of stump in pasture

✓

Feb. 1 - slope ~~near~~ n.w. of  
Quebrada Lucaracha, one of the  
headwaters of Quebrada Damas,  
10 km. s.e. Gargon, Huila 1600 m.

26

*Palicourea*

moist woods

27

*Coccoloba*

moist woods

✓

Feb. 1 - Top of ridge bet. Quebrada  
Cascajosa and Q. Damas, 9 km.  
s.e. of Gargon, Huila 1700 m.  
moist woods

28

*Liphocampylus scandens* (HBK.) G. Don  
bushy clearing along trail.

✓

Feb. 1 - Finca los Cedros, on ridge  
s. of Quebrada Cascajosa, 8 km. s.e.  
of Gargon, Huila 1600 m.arching, flat surface  
toward light.

Anal. Ballis:

B+C "

Ci 0.2%

Fui "

TC 0.2%

clump of sprouts about  
10 cm. tall and 1 dm. thick  
from a large stump, leaves  
with veins reddish beneath  
(bark sample)suffrutescent herb 1 m.  
tall, scarcely branched,  
thyse golden-yellow,  
immature fruit black  
with yellow calyx.  
fruit blue, fls. lavendervine, fls. deep red-purple.  
(stems not rough)



19929 patch of woods left in clearing  
Camp

30 *Cinchona pubescens* Vahl

Feb. 1 - saddle below Finca los Cedros,  
on ridge s. of Quebrada Cascajosa,  
7 m. s.e. of Gárgon, Huila 1500 m.

31 *Hedyosmum*  
patch of woods left along  
trail

32 *Ladenbergia magnifolia*  
common along trail between ~~1400~~  
1400 and 1600 m.

Feb. 1 - steep slope at head of  
small quebrada ~~at Gárgon~~  
in hills above Gárgon, ridge  
s. of Quebrada Cascajosa, Huila 1400 m.  
small patch of woods left in  
clearing.

33 *Chiococca alba*

34 *Coimibuena*

vine climbing in trees, fls. yellow,  
pleasantly fragrant.

anal. Collis: Tree 10 m. tall, 2 dm. thick  
below where it had been broken,  
1 dm. above, leaf veins reddish  
beneath (bark sample.)  
g. + c to  
Ci 0.6%  
g. to  
TC 0.6%

small tree, fruit green,  
herbage with a delicious  
spicy-fruity odor when  
broken. "granjo"  
tree 15 m. tall, 2.5 dm. thick,  
flowers white, fragrant,  
fruiting clusters pendent,  
not quite mature.

semiscandent shrub, fls. yellow.  
tree 10 m. tall, 2 dm. thick,  
leaves glossy, leathery,  
veins indistinct, fruit  
beginning to dehisce, buds green.



Feb. 4 - Valley of Rio Guarapao  
between Pitalito and Palestina  
and a bit above Palestina, Huila

1370-1600 m. ~~1500~~

About Pitalito the valley is broad and flat, largely devoted to pasture. The river has cut a ravine into it with steep sides. Going up the river the valley gradually narrows until, below Palestina, where the Quebrada Quebradona joins it, the plain has quite disappeared, and the low mountains come together. The map of Huila prepared by the Oficina de Longitudines, Bogota, is apparently seriously in error about the distances in this valley, as in 7 hours slow travelling we covered a distance that would be 40-50 km. on the map. Either the whole drainage is entirely too long, or the Quebrada Quebradona should join the river much lower down, or Pitalito is too near the mouth of the river.

A decidedly oriental cast is given to the landscape by the bamboo plus the steep mountains and low patchy clouds.

Here, as usual, most of the forest is cleared. A few tiny patches remain on steep places, as well as coffee plantations in the ravines.

Rodriguez says the bamboo here is native, not planted.

Bamboo (~~Bambusa~~ <sup>Guadua</sup> sp.?), the same as observed in other parts of Huila and collected near San Antonio Totlacillas, is more abundant here than seen anywhere else. (Rodriguez says than anywhere else except Caldas), and is the most conspicuous thing in the vegetation near the river and streams. Places where the rhizomes are somewhat exposed show that they are deeply buried, from 2 to 6 dm., and are as much as 10-15 cm. thick. Each culm terminates a branch up to 1 m. long, and one or two other branches arise below the culm.

The wood, up to 10 cm. or more thick, is used for innumerable purposes here, more than seen anywhere else. The frame-works of the mud houses is of bamboo <sup>poles</sup>, with split bamboo tied or nailed ~~to~~ it horizontally, then mud filled in and plastered outside. The fences are of horizontal split bamboo woven or vertical split bamboo. Aqueducts are constructed of half-bamboo conduits on bamboo poles. Gate hinges are 2 joints of bamboo with holes in each internode. Ladders are one piece with notches, etc. etc.



Feb. 6 - On and about the  
junction of the ridge between  
the Rio Guarapas drainage  
and Rio Guachicas drainage  
with the Cordillera Oriental  
boundary bet. Huila and ~~Cauca~~  
mossy ridge-type rain forest  
deep humus

19935

Palicourea

2200 m

- 36 *Cinchona officinalis*  
occurs in "manchas" and  
scattered through the forest,  
but mostly seedlings and  
root sprouts. Has been  
repeatedly harvested, even  
recently.

Quesada  
Oct 19Quesada  
Oct 1937 *Hedyotis*38 *Elaphoglossum*

covering old rotting tree stumps  
covering humus and sticks  
in trail

headwaters of Rio Vallalobos

(root bark)

Anal. Bellis:

g+C 5.3%

(g SO<sub>4</sub> 3.8%)

Ci Tr

Gui 2.1%

TC 5.4%

(trunk bark)

Anal. Bellis:

g+C 3.0%

(g SO<sub>4</sub> 3.0%)

Ci Tr

Gui Tr

T.C. 3.0%

slender erect shrub 11 m.  
tall, fls. yellow with green  
corolla lobes. Infl green.

sterile sprouts from  
partially fallen tree  
7 cm. thick and 3 m. tall,

leaves dull above, midrib  
red, stipules reddish.

Bark at most 3 mm. thick,  
a thin brown or gray-brown

layer outside, the rest  
greenish-white, quickly  
oxidizing red-brown, staining  
hands the same color.

(Bark samples - root and trunk)  
"quina tana" "quina fina"

slender shrub 1 m. tall,  
fls. whitish.



19940

*Polypodium*

epiphytic on tree-trunk  
1 m. from ground

41

in thick <sup>bushy</sup> ground cover under trees

42 *Palicourea*

19

43

44

in humus on ground, apex  
ascending among bushes

45

46 *Hedyosmum*  
abundant

47

48 *Polygodium longicaule* (Desv.) Moritz, *longicaule*  
det. L. H. Raven 467

epiphytic on tree trunks  
49 *Hymenophyllum*  
climbing on small shrubs

pendent

stem about 1 m. long,  
mostly on ground,  
inflorescence erect  
scandent shrub  
tangled in lower part  
of tree, 4 m. from ground.  
fls. infl. green, fls. greenish-  
yellow, corolla lobes greenish.  
shrub 1.5 m. tall, leaves  
very rugose, stems and  
inflorescence <sup>purple</sup> red, fruit  
bluish.

short liana, roots tuberifer-  
ous, fruit yellowish-green.

shrub 2 m. tall, fruit  
fleshy, grayish-white  
tree 4 m. tall, leaves  
aromatic when broken, but  
with a rather lemon-scented  
odor.

slender shrub 1.5 m. tall  
(same as 19977 but fruiting.)  
pendant

rhizomes forming networks  
on surface of shrub.



✓ same host 2300 m.  
small humus-covered  
knob with low vegetation,  
surrounded by cloud-forest.

19950 Cyathea

51 Weinmannia

52

53

the dominant plant

54 Vaccinium

abundant on ground and in trees

55

in bush on ground, seen lower  
down in forest high in trees

56

57 Vaccinium

common on ground

58 Ladenbergia

slender, not over 1 m. tall, fronds  
drooping at tips and tips of  
pinnae.

small bushy tree, in  
bud only. "enlanillo"

shrub 1.5 m. tall, bushy,  
~~stem~~ branching, covered  
with dead leaves, up to  
over a meter long, racemes  
and inflorescences erect.  
fls. yellow, fruit blue-black  
tangled shrub

shrub 1-1.5 m. tall, lvs.  
fleshy, coriaceous, pale  
beneath, infl. and fruit  
~~red~~ bright red.

corolla pink, 5 parted.  
shrub 1 m. or less tall,  
fls. whitish, fruit  
marked with brown.  
tangled low shrub.

anal. bellis:  
not more  
than traces  
of cinchon  
alkaloids.

bushy tree 3 m. tall, fls.  
white, fragrant, very  
brittle, fruit pyriiform.  
splitting from apex.  
Bark sample



Feb. 6<sup>th</sup> - ridge bet. Rio Guarapas  
drainage and Rio Guadicaes,  
just below the main ridge  
of the Cordillera  
rain forest, top of ridge 2000 - 2300m.

19959

60 *Palicourea*61 *Polypodium*  
epiphytic on tree trunks62  
terrestrial63  
terrestrial in deep loose humus

64

65

seedlings and sprouts ~~seen~~  
abundant but no large  
trees seen.66 *Phoradendron*

on dead fallen tree (not identified)

67 *Lepidocampylus scandens* (HBK) G. Don  
det. M. V.

68

69

70

71

terrestrial, in deep humus

slender shrub 2 m. tall.

fruits white.

slender shrub 4 m. tall,

infl. &amp; flo. bright purple

fronds arching and

pendent or ascending stipes

stem 1 m. long, weakly

calyx rose, corolla white <sup>marked with yellow</sup>

scape arching, flo. orange-brown

liana climbing in lower

branches of tree

stump sprout 6 m. tall,

fruit immature, two dry

unopened corollas in one infl.

"ojando"

very brittle, fruit whitish

liana climbing in ~~small~~ small

trees, fls. beautiful crimson

anthers greenish-gray

liana climbing in trees,

fls. white

small tree 6 m. tall, leaves

coppery beneath, fruits green;

not noticeably lactiferous

shrub, inflorescence purple

fruit immature.

fronds erect, arching, dark green.



34

1947 - Colombia

19972

- 73 *Trichomanes*  
epiphytic
- 74 *Cinchona officinalis*  
steep slope, scattered, no  $Q_1: 0.3$   
large trees seen, many  $C_1: 0.3$   
seedlings and sprouts.  
Region has been harvested  
recently. Said to be many  
small trees over a large area.

- 75 *Elaphoglossum*  
epiphytic on trunk of tree, common
- 76 *Asplenium*  
epiphytic on trunk of tree

- 77  
deep humus

- 78 *Ladenbergia*  
common from here down

- 79 *Carludovica*  
common

- 80 *Colocasia* 1800-1900m

- 81  
terrestrial in deep humus in recent  
clearing

- 82 *Pilea*  
in recent clearing

- 83  
shaded opening in forest, terrestrial  
in humus

87

35

p. fls.

in tree

all  
dull  
reddish  
thin,

pink

ick

apid,  
mean  
purple  
and  
scarlet,

with  
large  
fleshy

stems

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19972

73

74

75

76

77

78

79

80

81

82

83

shaded opening in forest, Terrestrial  
in humus

erect shrub 3 m. tall, fls  
whitish.  
fronds pendent from tree  
trunks.

Anal. Bellis: small sapling 4 m. tall  
g+c 9.0% 3-4 cm thick, leaves dull  
(1950g) 4.4% above, midrib barely reddish  
C<sub>2</sub> to stipules green, bark thin,  
guis to quickly oxidizing.  
TC 4.0% (Bark sample)  
"Quing tuna" "Quing fina"

fls. white

Anal. Bellis: tree 15 m. tall, 2 dm. thick  
not more than traces TC (bark sample)

leaves erect, deeply bipid,  
spike erect, crimson.  
shrub, leaves red purple  
beneath, ~~bark~~ calyx and  
lower half of corolla scarlet,  
upper half yellow.  
fls. crimson, lip tinged with  
yellowish and with a large  
white scale. leaves fleshy.  
stems purple.

fls. brown. with lip and tips  
of perianth yellow.



19972

- 73 *Trichomanes*  
epiphytic
- 74 *Cinchona officinalis*  
steep slope, scattered, <sup>no 90: 93</sup>  
large trees seen, many <sup>cd: 0.7</sup>  
seedlings and sprouts.  
Region has been harvested  
recently. Said to be many  
small trees over a large area.

- 75 *Elaphoglossum*  
epiphytic on trunk of tree, common
- 76 *Asplenium*  
epiphytic on trunk of tree

- 77  
deep humus
- 78 *Ladenbergia*  
common from here down
- 79 *Carludovica*  
common

- 80 *Polypodium*  
1800 - 1900 m

- 81  
terrestrial in deep humus in recent  
clearing

- 82 *Pilea*  
in recent clearing

- 83  
shaded opening in forest, terrestrial  
in humus

erect shrub 3 m. tall, fls.  
whitish.  
fronds pendent from tree  
trunks.

Anal. Bellis: small sapling 4 m. tall,  
g+c 9.0% 3-4 cm thick, leaves dull  
(<sup>950</sup> 4.1%) above, midrib barely reddish,  
stipules green, bark thin,  
quickly oxidizing.  
TC 4.0% (Bark sample)  
"Quing tuna" "Quing fina".

fls. white

Anal. Bellis: tree 15 m. tall, 2 dm. thick  
not more  
than traces TC. (bark sample)  
leaves erect, deeply bipid,  
spike erect, crimson.  
shrub, leaves red purple  
beneath, ~~bark~~ calyx and  
lower half of corolla scarlet,  
upper half yellow.  
fls. crimson, lip tinged with  
yellowish and with a large  
white scale. leaves fleshy.  
stems purple.

fls. brown, with lip and tips  
of perianth yellow.



19984

*Nertera granadensis* (L.) Druce  
in humus in recent clearing, rare,  
only seen in two spots in this region.

85

in recent clearing, among  
old ~~logs~~ logs, stumps & weeds.

86

in deep woods

87

epiphytic

88

*Monotropa uniflora* L.  
in deep humus

89

open woods and edge of clearing

90

open woods

Feb. 7 - 2 km. above Palestina, along  
~~bed. quebrada and quebrada Aguadilla~~  
s. of Pitalito, Huila 1600 m.  
Pasture mostly overgrown with  
pteridium, with wooded ravines.

91

under ferns

92

~~hyp~~ *Leptorhynchium*

93

*Borreria*

common

94

*Leptorhynchium*

common

95

*Hypericum*

small wet place

96

*Daucos*

prostrate, light green,  
fls. yellow-green.

vine, fls. purplish-white.

shrub 1.5 m. tall, fls. green,  
ripe fruit lavender.

lip and edges of upper lip of  
fls. deep purple, center green.  
leaves fleshy.  
erect, dead.

spikes green

erect shrub up to 1 m. tall, spikes  
purple, fruit red. lower part  
of stem with aerial roots.

fls. yellow, marked with  
purplish brown.

fls. white, plant erect or  
ascending.

spikes erect, fls. purple.

fls. yellow.

fls. white.



19997

wooded ravine

- 98 *Boehmeria*  
single tree left in pasture
- 99 *Lambucis*  
single tree planted near house
- 20000 *Eupatorium*  
weed in pasture
- 01 *Salvia*  
weed very common in coffee plantation
- 02 *Salvia*  
weed in coffee plantation
- 03 *Lida*  
weed in coffee plantation
- 04 *Salvia*  
weed in coffee plantation
- 05 *Browallia*  
weed in coffee plantation
- 06 *Bidens*  
very abundant weed in and around coffee plantation
- 07 *Salvia*  
abundant weed in pastures and cultivated places
- 08 *Galium*  
wooded bottom land
- 09 *Galium*  
wooded bottom land, edge of clearing

large liana <sup>juice of stem</sup> said to be used to cure snake bites, taken orally. "añaguasca" tree 4 m. tall, spikes pendent.

small tree, flowering profusely but seldom setting fruit. Inflorescence hemispheric, fls. white. bark used as purgative. "sauco"

herb 1 m. tall, branched. flowers lavender. fls. yellow "botoncillo"

fls. blue.

spreading weed, up to 7 dm. or 1 m. long, fls. yellow. herb up to 1 m., sprawling, fls. bright chrome yellow. flowers brilliant blue-purple.

disk orange-yellow, rays white. ~~etc~~ from running rhizomes.

fls. deep blue-purple.

fls. pinkish white

vine-like, roots red-orange, used for a dye for cloth. fruits orange, fleshy "raicilla"



20010

*Acalypha*

wooded bottom-land.

11

weedy clearing in wooded bottom-land

12

*Heliconia popayanensis* H.B.K.~~*Heliconia*~~ ~~*lagoi*~~ ~~*popayanensis*~~

common in wooded bottom-land

"Falso"

shrub 2.5 m tall, spikes  
pendent, & ascending, styles  
rose-colored

vine, rachis of inflorescence  
thicker than stem, upper  
flowers brilliant scarlet,  
lower ones green, deep purple  
distally.

tall tree, up to 3-4 dm.  
in diam. here, said to  
reach over 1 m. down the  
river. (specimen of leaves  
from seedling) (specimens  
of bark and wood from  
large tree). Trunks bare  
for some meters.

As Romulo Quellar is  
much interested in the  
fiber from the inner bark.  
It can be easily peeled  
from the full length of the  
logs, dried in about 5 days,  
decorticated by hand with  
no difficulty. The fiber  
is light brown, quite fine,  
much more so than figue,  
and much stronger and  
more durable. The fibers  
are extremely long, and  
are used locally for rope,  
twine, halters, cinches,  
pack saddles, etc. Enormous  
quantities could be produced here  
and in other parts of the country.



- Feb. 8 - Palestina, along Quebradona,  
s. of Pitalito, Huila, 1800 m.  
bushy cut-over land  
20013 *Palicourea*

- 14 *Psychotria*  
15 *Jussiaea*  
abundant in muddy places

- Feb. 8 along  
Quebradona 3 m. below  
Palestina, s. of Pitalito,  
Huila 1700 m.

- 16 *Cinchona pubescens* Vahl.  
patch of woods in ravine,  
mostly bamboos.  
(sprouts and seedlings of this  
occasional throughout region below Palestina)  
17 *Palicourea*  
patch of woods in ravine

18

- Feb. 8 - Rio Guarapas 5 km. below  
Palestina, s. of Pitalito, Huila  
bushy hillside 1600 m.

18

- 19 *Coccyz pselum*  
common

- 20 *Emmenanthe umbellata*

- 21 *Ladenbergia magnipolia*  
sprouts common in cut-over slopes

- shrub 4 m. tall, infl. red-purple  
fruit blue-black when ripe,  
mostly immature.  
bush 1 m. tall, fruit immature  
prostrate, stems fleshy,  
forming a carpet on  
mud, fls. bright  
yellow, 5-merous.

Anal. Bellis;

T.C. Fr.

level part  
off valley.

- small tree 6 m. tall, 1 dm.  
thick, bark gray, older  
leaves red, others with  
reddish veins, stipules  
green, erect (bark sample.)  
small tree 5 m. tall,  
infl. and fls. range-red,  
fruit immature

- vine climbing through bushes,  
fl. yellow, fruit green.  
prostrate, fls. lavender,  
fruit pyriform, blue  
vine climbing in bushes,  
fls. white.  
sterile stump sprouts.



20022

*Biophytum*

common on rocky banks

223

*Peperomia*common on lower slopes  
above stream

224

*Gonzalagunia*

225

*Cuphea*common weed in openings  
and along trail.

✓✓

Feb. 8 - Rio Guarapas, 5 km.  
above Pitalito, Huila 1350 m.  
Wet bottom-land, wooded  
principally with bamboo.

226

*Liparuna*

227

*Boehmeria*

228

*Boehmeria*

very common from here to above Palestina

✓✓

Feb. 9 - Pitalito, Huila 1330 m.  
roadsides and fence-rows.

229

*Vit*

30

*Triumfetta*

31

*Triumfetta*

32

*Coussaportia*leaves somewhat serrated,  
~~petals~~ pink, calyx yellow.  
bush 2.5 m. tall, fruit  
reddish, leaves distichousshrub 1.5 m. tall, fls. white,  
4-petaled, fruits fleshy,  
gray-white.  
fls. rose-pink, 2 petals  
erect, 4 depressed.shrub 4 m. tall, odor faint  
but pleasant, scarcely  
resembling lemon-grass,  
fruit pyriform, flesh-pink,  
2 cm. in diam., scarcely  
any maturing.scandent shrub, fls. lavender  
shrub 3 m. tall, spikes  
~~drooping~~ pendent.vine, fls. yellowish, fruit fleshy, black.  
inflorescence flat, whitish  
herb 1.5 m. tall, fls. yellow.  
herb 1.5 m. tall, fls. yellow.  
shrub 1 m. tall, ripe fruit  
orange.



70033

34 *Borreria*35 *Euphorbia*36 *Monnina*37 *Lantana*

38

39 *Acalypha*40 *Witheringia solanacea* L'Her.  
shaded place det. A.T.41 *Stellaria*  
shaded place, under bamboo42 *Solanum*  
shaded place, under bamboo43  
shaded place, under bamboo44 *Solanum*45 *Tournefortia*

46

47 *Copaiba*48 *Indigofera*

fls. white

fls. white

scandent herb up to  
2 m. long, bracts white.  
erect herb 1 m. tall, fls.blue-violet with yellow keel  
erect herb 1 m. tall, fls.

purple

small tree

small tree, 4 m. tall,  
monocious but staminate  
spikes very rare at this  
season.

erect herb 1.5 m. tall.

fls. yellowish, ripe fruit red.  
prostrate, fls. white,  
petals deeply bifid,  
styles 3.herb 1.5 m. tall fls. pale  
green, anthers yellow, fruit  
immature.vine climbing on shrubs, fls.  
green. leaves variable in  
cutting.herb up to 1 m. tall  
calyx purple, corolla  
white fruit immature  
(another plants ripe ones  
orange)

shrub 1.5 m. tall.

tree 6 m. tall, fls. greenish  
white.shrub 3 m. tall, fls. white  
suffrutescent herb, 1.7 m. tall.var. *solanacea*  
Humzger



20049

*Rubus*  
abundant

4 50

Feb. 10 - Las Mesitas, 3 km. <sup>sw.</sup> of  
San Augustin, valley of <sup>upper</sup> Rio  
Magdalena, Huila 1750 m.  
small patch of tangled woods.

51 *Palicourea*  
edge of woods

52 *Cinchona pubescens* Vahl  
one large tree and several  
small ones in a clump.  
said to be very common  
in the region

Feb. 11 - Lavaderos (ridge bet.  
Rio Naranjo and Rio Granadillo)  
south of San Augustin, Huila  
patches of thick moist forest  
with clearings between.  
2000 - 2200 m.

53 *Cinchona officinalis*  
Abundant in a large "marcha"  
the trees much larger along the  
trail than in deep forest.

arching shrub 1 m. tall  
fls. white, fruit  
immature.

wine climbing in  
trees, fls. pale/greenish.

shrub 3 m. tall, infl.  
orange-red, turning red  
in fruit, mature fruit blue-black.

Anal. Bellis:  
g. + c. tr.  
Ci 1.7%  
gui tr  
TC 1.7%  
large tree, 2 branches  
from near base, main  
trunk gone, one branch  
3 dm. in diam., 15 m. tall.  
Bark well over 1 cm. thick,  
very bitter, whitish inside  
but quickly oxidizing brown.  
(bark sample) "cascarillo"  
"requezon".

Anal. Bellis:  
g + c tr  
Ci 0.2%  
gui tr  
TC 0.2%  
tree 12 m. tall, 2 dm. thick,  
leaves glossy above, older leaves  
red, stipules erect; bark <sup>com.</sup> thick  
rough, checked, with a brown  
corky layer (bark sample)  
fls. red-purple, scarcely fragrant.



20054

*Bahamastrera*

cleared trail-side

55

56

deep forest

57

*Cinchona officinalis* L.isolated trees scattered  
in pasture, said to be about 11 yrs. old.

10

58

*Ladenbergia*~~isolated~~ isolated tree in pasture  
abundant in forest

59

*Palicourea*

common in forest

60

*Guettarda*

edge of clearing

61

*Viola*

hummock in trail

62

*Fuchsia*

cleared trail-side

63

*Dioscorea*

herb 1 m. tall, fls. purplish-green.

vine climbing in shrubs,  
fl. bright yellow with red  
markings near center.slender shrub 4 m. tall,  
fls. white, very fragrant,  
both 4- + 5-parted even  
in same inflorescence.anal. bellis:  
not more  
than  
traces of  
Cinch. alk.small tree 4-5 m. tall, 1 dm.  
thick, fls. red-purple, scarcely  
fragrant, hairs white.  
bark about 6 mm. thick (bark sample).  
(photos)small tree 8 m. tall, flowers  
white, very fragrant,  
fleshy. (reaching much  
larger size - 20 m. in forest).shrub 2.5 m. tall, inflorescence  
deep red-purple, corollas  
lavender.tree 15 m. tall, buttressed  
trunk 5 dm. thick, fls. white  
with thin edges to corolla  
lobes.prostrate, mat-forming,  
fls. white, lower petal  
deep purple.herb 1 m. tall, fls. with  
calyx + hypanthium greenish-pink,  
petals scarlet, fruit fleshy,  
translucent when ripe.  
slender vine climbing in  
small trees, spikes pendent.



- 20064 *Ladenbergia*  
abundant in forest
- 65 *Cinchona pubescens* Vahl  
common, chiefly as stump  
sprouts and seedlings, up  
to 2200 m., with *C. officinalis*  
but showing no evident  
signs of hybridization. ~~stipules~~  
~~erect, green, turning red.~~
- 66 *Miconia*  
second growth along trail
- 67 *Palicourea*  
second growth along trail
- 68  
second growth along trail  
~~second growth along trail~~
- 69 *Tournefortia*  
second growth along trail
- 70 *Tournefortia*  
second growth along trail
- 71 *Ladenbergia magnifolia*  
isolated tree in clearing on slope

Feb. 11 - Rio Naranjo, directly  
south of San Augustin, Huila  
~~brushy slope~~

- 72 *Cinchona pubescens* Vahl.  
steep, brushy slope, abundant,  
found from 1000 to 2200 m.
- 73 *Rubi.*  
edge of wooded ravine in canyon  
bottom
- 74 *Cinchona pubescens* Vahl  
edge of wooded ravine in canyon  
bottom.

tree 3 dm. thick, top broken  
off.

- Anal. Ballis: small tree 7 m. tall, ~~stipules~~  
g.t.c. 2. veins reddish, stipules  
Ci 0.7% erect, bark hard, closely  
Qui 2 adherant (bark sample)  
TC 0.7% fruits with fungus fruiting  
blisters.

small tree 4 m. tall, fls.  
indigo with yellow beel.  
shrub 4 m. tall, inf.  
red, fruit immature.  
small tree 5 m. tall,  
fruit green.

shrub 3 m. tall, fls.  
dull white.

- 1900 m. small tree 5 m. tall,  
fruits white.  
tree 6 m. tall, sterile.

1800 m.

- 1700 m. sapling 5 m. tall, leaf veins  
red. "naranjo"

vine, climbing in small  
tree.

shrub 4 m. tall, fls. deep rose,  
edges of lobes white, hairs white,  
very fragrant. "naranjo"



near mouth of

Feb. 12 - Quebrada La Candela,  
 affluent of Rio Naranjo above  
 San Augustin, Huila 1900 m.

completely cleared land,  
 used as pasture but  
 dominated by Pteridium.  
 Thickets along stream

20075

Terna

tree in dooryard

2 76 Borreria

muddy shaded place

3 77

muddy place

4 78 Drymaria

muddy shaded place

7 77 Cardamine

muddy shaded place

8 80

abundant weed in openings  
 and shaded places near stream.

11 81 Centropogon

fence row, among "figue" plants

Feb. 12 - ridge between Quebrada  
 La Candela and Rio Naranjo, West  
 of San Augustin, Huila 1900 m.  
 cleared land used as pasture  
 but largely overgrown with  
 Pteridium and clumps of  
 bushes, Baccharis, etc.

tree about 5 m. tall,  
 2 dm. thick, spreading.

- ripe fruit yellow  
 weakly erect herb, fls. white

herb up to 2 m. tall, fls. white

fls. white, herb apparently  
 annual, branches ascending,

- weak  
 fls. white.

prostrate branched  
 herb, rooting at nodes,  
 fls. white, 3 parted.

herb 2 m. tall, somewhat milky,  
 fls. green, two upper lobes somewhat  
 purplish outside. fruit immature.



- 20082 *Notholaena*  
bare earth above trail
- 83 *Euphrea*  
wet place
- 84 *Tagetes*  
common weed
- 85 *Castilleja*  
scarce
- 86 *Lisyrhynchium*  
in thin grassy places
- 87 *Pteridium aquilinum* (L.) Kuhn  
dominant plant on cleared hills
- 88 *Ageratum conyzoides* L. (white form)  
abundant
- 89 *Galinsoga*
- 90 *Drymaria*  
abundant on grassy slopes
- 91 *Drymaria*  
abundant on grassy slopes
- 92 *Drymaria*  
common where not grazed off
- 93 *Drymaria*  
very common weed practically everywhere, these plants from shaded spot.
- 94 *Drymaria*  
shaded spot
- 95 *Drymaria*  
shaded spot
- 96 *Lantana*  
edge of thicket
- 97 *Baccharis*  
dominant shrub in first stage after cutting and overgrazing.

white beneath

fls. pale pink.

herbage with strong unpleasant aromatic odor, fls. orange. tips of bracts red.

tufts, in fruit only

from running rhizomes, these odorless, bonds up to 2 m. tall.

strong odor, white fls.

ray, white, disk yellow. fls white.

rays and disk yellow.

erect, petals pink.

herb up to 1 m. tall, fls. orange yellow.

practically odorless

bush 1 m. tall, fls. pinkish.

shrub 2 m. tall, fls. white.



20098

Galium

fairly common in sheltered places

99

*Cinchona officinalis* x *pubescens*?  
hilltop with clump of woods

Feb. 12 - ridge north of Quebrada la Candela, affluent of Rio Naranjo, south west of San Augustin. Huila moist forest, undergrowth 2000 m. of ferns, on rounded ridge-top.

20100

*Cinchona officinalis* L.

abundant in a fair sized "mancha", here 50 or 60 trees of all sizes to an acre, not including hundreds of very small seedlings somewhat scattered, but common in the rest of this patch of woods (about 1/2 km. or more long).

5 01

*Anguria*

edge of woods near stream

wine like, climbing among weeds, fruits orange, fleshy.

sprout or seedling, growing with a clump of *C. officinalis*, *C. pubescens* not far away. has every appearance of being a hybrid, in habit, stipules, coloring, etc. resembling *C. officinalis*, but leaves approaching *C. pubescens*. (see #20131 and #20135 for probable parents) another similar seedling observed nearby.

Anal. Bellis.

not more  
than traces  
of *Cinchona*  
alkaloids.

g.t.c. tr.

Ci. 0.4%

qui. tr.

TC. 0.4%

tree 15 <sup>m</sup> tall, 2.5 dm. thick, leaves shiny above, rather leathery, petioles purple, blades turning red when old; inflorescence red-purple, fls. purple with white-hairs on corolla-lobes; bark brown, longitudinally ridged, a little less than 1 cm. thick (bark sample). herbaceous vine climbing over trees, flowers orange, fruits pyriform, not quite ripe.



20102

Weinmannia

edge of woods near stream, common locally

203

Lab.

open woods, filled with a rank growth of Pteridium 2 m. deep, on edge of ravine

204

Sphagnum

woods on ridge top

205

*Dielystegia orabifolia* (Hook.) Miersas *purdieana* (Benth.)

in deep humus

Snelders &amp; Maas

det. Maas 1983

Feb. 13

ridge ~~top~~ n. w. of Rio Narango, n. w. of San Augustin Huila

2100 - 2900 m.

rain-forest (not extreme) on flat ridge-top

206

Psychotria

207

Palicourea

208

Tara

209

*Pennisetum clandestinum*

the dominant grass in a clearing + used for pasture

210

Cyperus

common in spots in clearing used for pasture

tree 7 m. tall, fls. white "enseñillo" used as a remedy for sickness in livestock shrub up to 2 m. tall weak, supported by ferns, leaves leathery, midrib red, rest of veins obscure, blade white beneath, inflorescence and fruits red, corolla pinkish white, deep cushions, pink. "barbacha" whole plant whitish.

shrub 1 m. tall, fls. white, fruits mostly immature, blue when ripe.

shrub 2.5 m. tall, infl. and fls. purple

shrub, fls. white, very fragrant, fruit immature

forming a thick cushion, styles protruding from terminal bud. "pasta quicui"

spikes black with yellowish edges.



20111

Senecio

clump growing on stump in clearing

12

climbing on fence ~~at~~ in clearing

13

Hymenophyllum

on base of small tree

15

~~hab in~~  
~~canopy~~

16

Drymaria

in grassy clearing

17

abundant on tree trunks

18

Blechnum

abundant

19

Psychotria

20

Ladenbergia

common in forest

21

edge of forest climbing on tree trunk

22

Palicourea

abundant in undergrowth

short scandent herb, fls. bright yellow, odor unpleasant. vine, fruit black.

Tree 5 m. tall, leaves glossy, rugose, fruits spherical, glossy, immature. rhizome climbing on base of tree trunk, fronds somewhat arching. herb less than 1 m. tall, fls. yellow, calyx yellow-green, fls. white, petals bifid.

rhizome occasionally climbing shrub 3 m. tall, fls. yellow. anal. bellis: tree 20 m. tall, 3 dm. thick, not more than (others much larger) flowers white, fleshy, fragrant; traces of "requecón".

woody vine climbing for several meters up tree trunk. stems red-purple, calyx green, corolla lemon-yellow with green lobes. shrub 3 m. tall, inflorescence bright purple, fls. lavender, fruits very juicy, blue-black. "frutillo".



20123

*Drymaria*

abundant in clearings

24 *Miconia*25 *Blechnum*26 *Blechnum*27 *Polypodium*

in undergrowth

28 *Cinchona officinalis* L.

very rare

29 *Palicourea*30 *Cinchona officinalis* L.

very rare here

Feb. 14 - ridge bet. Rio Naranjo  
and Quebrada La Landela, <sup>with west</sup>  
of San Augustin, Huila 1900 m

31 *Cinchona officinalis* L.

clump of woods on hilltop

32 *Coccythrum*

edge of woods, in grass.

33 *Palicourea*

clump of woods

herb up to 8 dm. tall, ~~very~~ weak,  
supported by other plants,  
has grayish cast due to  
pubescence, fls. white, petals  
bifid, "alberquilla".  
tree 12 m. tall, fruit immature.

rhizome climbing about  
1 m. up trunk of tree.

herb up to 1 m. tall,  
fls. white.

sterile

2200 m.

sapling 3 m. tall, leaves  
dull above, stipules pointed.  
(like plant at head of Rio Villalobos)  
shrub 2 m. tall, fls.  
yellow.

sterile sapling 3 m. tall,  
leaves dull above, stipules  
blunt (intermediate between  
#20128 and #20100).

~~sterile~~ sapling 3 m. tall,  
(nearby were large trees)  
old leaves red. "quina canchosa"  
bark said to be worthless, by old  
guineos, and to have been used to adulterate  
good bark's "quina"  
prostrate, fls. lavender.

shrub 1.5 m. tall, infl.  
yellow, fruit green.



20134

- clump of woods on hilltop
- 35 *Cinchona pubescens* Vahl.  
end of clump of woods  
on hilltop
- 36 *Solanum*  
near clump of woods on hilltop
- 37 *Ladenbergia*  
clump of woods on hilltop
- 38 *Borreria*  
grassy place on edge of woods
- Feb. 14 - near confluence of  
Quebrada la Candela with  
Rio Naranjo, <sup>south</sup> west of San  
Augustin, Huila 1850 m.
- 39 *Palicourea*  
bushy slope
- Feb. 14 - near San Augustin  
Huila 1700 m.
- 40 *Rhus* (*Toxicodendron*)
- Feb. 14 - gorge of Rio Magdalena below San  
Augustin, Huila 1550 m.
- 41 *Ochroma*  
bushy hill near edge of cliff, abundant, young trees abundant

shrub 1 m. tall, fruit red.

sapling 3 m. tall  
leaf veins red, stipules  
erect, later reflexed.  
small flat-topped tree,  
branched only at extreme  
top of trunk, stem-leaves  
large, pinnately lobed.  
fruit not mature, pendent  
"tomate macho" | yellow when ripe  
not eaten. 7 m. tall, leafy from half-way up.

sapling 3 m. tall, fls.  
white, fleshy, fragrant.  
"guacillo"  
decumbent, fls. white.

shrub 3 m. tall, infl.  
pale green, fls. bluish,  
lobes green.

shrub. "caspicaracha"  
said to be very poisonous  
to the skin.

tree 8 m. tall, 2 dm. thick, fls.  
white. Bark apparently with  
very little fiber. "balseo"



Data on Cinchona from Schultes' memo dated Feb. 8, 1943, entitled "Quinine in Vicinity of Pitulito, Huila".

Cinchona was seen at three localities, all apparently the same form, called "quina tuna". All of these localities were apparently at the headwaters of the affluents of the Rio Villalobos, above Yunguillo, in Cauca, in detail as follows. Source of Rio Cauchos - ridges have considerable "quina tuna" including many large trees.

Alto de Petroles, ridge near Quebrada Hedionda "quina tuna" up to 200 per hectare, including some trees one foot or more in diameter.

Alto de Guayabos, apparently running west from the head of Rio Guachicas, and a ridge at the head of R. Guachicas. Here "quina tuna" (Schultes 5239) is very abundant, 1500 (average) and even as much as 2000 small trees per hectare mostly about 2 inches in diameter.

Schultes says these ridges are sub-paramo.

His no. 5239 is very similar to my plants from above Palestina (Feb. 6-7), with pointed stipules, acuminate leaves, but the twigs, petioles and veins strigose.



Feb. 24 - <sup>caño tipo, bet. caño Aguas Claras</sup>  
<sup>and caño grande,</sup>  
<sup>4.5 km. sw. of Villavieja,</sup>  
 Meta 500-550 m.

rain-forest but not an  
 extreme type, the "foothill  
 forest" of Bates, somewhat  
 cut over but not cleared.

20142 ~~Heliconia~~ *Ramessala guianensis*  
 small colony on slope

43 *Tococa guianensis* Aubl. <sup>det. J. J. Sm. & J. J. Sm.</sup>  
 bottom of hill, upper edge  
 of plain

44 *Psychotria*  
 45 *Psychotria*

46

47

epiphytic on trunk of tree

48 *Weigeltia schimperiana* Mez?

49 *Jacaranda*

sandy soil quite fine  
 and brownish.

tree 12 m tall with a hard  
 woody stem 15 cm. in diam.  
 leaves obelichous, 8 or 10  
 green at one time, petiole  
 1 m. or more long, blade  
 2 m. long, narrowly  
 elliptical-oblong, spike  
 erect, 2 m. long, on a bracted  
 peduncle 1.5 m. long, fruits  
 green, aril of seed orange,  
 said to be brilliant red  
 when fully ripe

shrub 7 m. tall, tubercles  
 on leaves contain small  
 ants. fls. white, fruit  
 black. inflorescence red.

in fruit, green in flower

shrub 1 m. tall. fls. white.

shrub 2 m. tall, inflorescences  
 pendent, ripe fruit black.

mostly immature.

shrub 1.5 m. tall

more or less horizontal.

single unbranched ~~stem~~  
 stem, fls. & fruit pinkish.  
 tree 30 m. tall, 3-4 dm. thick  
 flower lavender-purple.



20150

clump of plants on a small  
branch (fallen on ground)

51 (Myrt.)

52 (Myrt.)

edge of clearing

53 Psychotria

54 (Labi.)

55 Randia

56 (Myrt.)

Feb. 24 - along Rio Coca, ~~3 km.~~ 4.80 m. e. of  
Villavicencio, Meta  
somewhat disturbed "piedmont  
forest" (Baker) slender trees  
with much undergrowth

57 Cephaelis  
common in undergrowth

58 Palicourea

59 Cephaelis  
common in undergrowth

roots fleshy, pale green,  
fruits scarlet.

slender shrub 4 m. tall,  
infl. red, ripe fruit black.  
fls. orange with greenish tips.  
plant erect, stem short.  
shrub 1 m. tall, fruit orange  
shrub 1 m. tall, infl.  
pendent. fruit immature.

slender tree 6 m. tall, enlarge-  
ments on stem, house small  
ants, fruit immature.

small tree 10 m. tall,  
fruit pendent, immature,  
when cut with strong  
resinous odor.

shrub 2 m. tall, bracts  
greenish, infl. stiff.  
shrub 2.5 m. tall, peduncle  
red, infl. orange, corolla  
yellow.  
shrub 1 m. tall, bracts  
scarlet, calyxes yellow,  
corolla cream-yellow, fruit  
pyriform, blue.



L 20160 (acanth.)

common in undergrowth

L 61 (Helast.) Monodactylum

L 62 Cephaelis

L 63 Cochlospermum  
second growth

L 64 (Rub.)

L 65 Delaginella

L 66 Psychotria

L 67 Licania

L 68 (Hel.) Centropogon cornutus  
in second growth det. M. H.

L 69 Drymaria cordata

clearing, rather bushy

L 70 Jussiaea

wet place in clearing

L 71 Jossypium

clearing

L 72 Triplaris

edge of river

erect herb, <sup>1-1.5 m. tall</sup> flowers scarlet.

weak herb, leaves purple beneath,  
fls. white, stem winged.

shrub 1.5 m. tall, bracts  
greenish

leafless small tree, flowers  
brilliant yellow, fibers in  
bark very strong.

shrub 2 m. tall, fls. white  
stem erect, frond horizontal  
slender shrub, 5 m. tall,

fls. white, fruits turning  
yellow, then bright red.

shrub 3 m. tall, fruit pink.  
herbage with lemon-grass  
odor.

suffrutescent herb,  
fls. pink.

fls. yellow, about 6-7 mm.  
across

shrub 2.5 m. tall, fls.  
bright lemon yellow,  
turning pink

tree 18 m. tall, ~~stem~~ branchlets  
hollow, ~~large~~ inhabited  
by very vicious large  
stinging ants, enlarged  
calyx lobes bright red-pink.  
tree conspicuous in forest.  
wood rather hard.



Feb. 25 - near road to Puerto Lopez,  
between (Rio Guenane) and Caño  
Zunio, 3 km. e. of Apia, 13 km.  
s. e. of Villavicencio, Meta  
small patch of scrubby 42 m.  
moist forest surrounding a  
swale, mostly dry at this  
season, but obviously a  
pond most of the year,  
in savannah-type grassland.  
Similar patches scattered  
here and there. The soil  
is rich and black, a typical  
grassland soil. Debris  
around anthills, brought  
up from below is yellowish.

L 70173 (Gutt.) *Vismia*  
edge of woods, pioneer species, com. mor.

L 74 (Lab.)  
grass at edge of woods

L 75 (Gent.)  
grass at edge of woods

L 76 (Comp.)  
grass at edge of woods

L 77 (Gent.)  
grass at edge of woods

Judging by the amount  
of invasion by seedlings  
and sprouts of the pioneer  
tree and shrub species,  
this ~~sav~~ grassland is  
maintained only by  
periodic fires. Otherwise,  
in a few years it would  
be grown up to bushy  
second-growth forest.  
As it is it contains  
scattered patches and  
individuals of various  
palms, including  
*Mauritia* sp., as well  
as patches of second-  
growth bush and scrubby  
forest, in addition to  
forests in depressions  
surrounding swales  
and stream courses.

shrub 4 m. tall, bushy,  
fls. copper-color.

herb ~~with~~ up to 3 dm. tall,  
with penetrating aromatic  
odor, calyces purple. leaves  
very rugose.

erect, flowers greenish-white.  
(stem sharply 4-angled)

suffrutescent herb up to  
1 m. tall, fls. pinkish-lavender.  
erect, fl. greenish-white  
(stem very slightly 4-angled)



20178 (McLest.)

grass at edge of woods, common.

L 79 (Stercul.?)

grass at edge of woods

L 80 Cuphea

grass at edge of woods.

L 81 (McLest.)

L 82 Panicum

common in grass at edge of woods

L 83 (Gram.)

common carpeting forest floor

L 84 Delaginella fragilis A. Braun det S. W. L. 1993

common carpeting forest floor

L 85 ?

rare in woods, only one seen.

L 86 (Myrs.?)

edge of swale

L 87 Miconia trivenia (Sw.) Don-ey L. 1993

Det J. W. L. 1993

L 88 Myrt.

edge of swale

L 89 Jacaranda

L 90

in mud in swale, & would  
be inundated most of year.

L 91

in mud, in swale, common

L 92 Ficus

edge of swale

fls. pink.

fl. deep chrome-yellow.

fls. deep rose-purple

erect herb, fls. pink

spreading from loose tufts.

culms spreading

part with inflorescences

ascending.

tending to be vine-like, apparently  
sterile.

fls. pale lavender.

small straggly tree,

leaves with veins obscure,

inflorescences cauline,

many below leaves, white,

flowers white.

shrub 2-3 m. tall, fls. white,

fruit immature.

straggling shrub-like

tree, fruit green.

shrub 4 m. tall, fls. deep

violet, buds glossy.

fl. bluish

fls. white, petals ? thin.

straggly tree 7 m. tall,

fruit immature.



20197 *Hirtella*

edge of swale

94 (Cecropia?)

edge of swale

95 (

mud at edge of water, in swale

Feb. 25 - road to Puerto Lopez  
between Rio Guenane and  
Caño Zuria, 7 km. e. of Apiay,  
17 km. s. e. of Villavicencio,  
Meta

481 m.

savanna, with scattered  
trees and patches of woods

96 *Borreria*

97 *Borreria*

in edge of brush patch

98 *Liparuna*

brushy patch of second-  
growth woods

99 *Clusia*

brushy patch of second-growth  
woods

Feb. 28 - west slope of Cordillera  
Oriental 1 km. s. of Bogota on  
road to Villavicencio, 2.4 km. n. of  
Parque de la Cruz Verde, Cundinamarca

3300 m.

paramo and subparamo

straggling shrub,  
fls. white with dark  
red stamens.

straggling shrub, fls.  
yellow, fruit immature.  
fls. blue-lavender, stem  
prostrate, leaves distichous

erect, fls. white.  
fls. white

shrub 2 m. tall, with  
strong lemon-grass  
odor, fruit flesh-pink,  
pyriform, fleshy,  
small tree 5 m. tall,  
lactiferous, leaves  
fleshy, fruit immature.  
leaves paler beneath.



2019

20200

Befaria

tall bush on steep slope

01 Viburnum

tall bush on steep slope

02

terrestrial on rocky ledge

03

in tall bush on steep slope

04 Miconia

in tall bush on steep slope

05 Bidens

in tall bush on steep slope

06 Cupressus

paramo, obviously planted  
as this and a nearby Eucalyptus  
are the only trees in the vicinity

07

heavily grazed flat open  
grassy place, common with 20208

08

heavily grazed flat open  
grassy place, common with 20207

09

low bush with  
abundant Espelletia, "paramo"

10

the abundant in this sparse  
low bush, ~~on~~ on flat  
bench, "paramo"shrub 3 m. tall, corollas  
rose, sticky, anthers cream  
color, filaments white, turning  
red with age.shrub 3 m. tall, fls. ivory-  
white.

erect, fls. greenish-yellow.

shrub 1 m. tall, rays  
white, disk greenish-yellow,  
turning brown.

shrub 1.5 m. tall, fls. white.

vine-like, climbing in  
bushes, fls. yellow.tree 6 m. tall, branches  
rather drooping.

fls. bright yellow

fls. white, buff toward base  
of ligules.rhizomes short, caespitose,  
erect, fronds erect, stiffish.almost acaulescent, with  
large rosette, scapes  
axillary, fls. yellow.



- 20211 *Befaria*  
scattered in sparse low  
brush or "paramo" on wide flat  
bench.
- L 1 12 *in situ*  
in sparse low brush or "paramo"  
on wide flat bench
- L 1 13 *in situ*  
rare in sparse low brush or "paramo"  
on wide flat bench
- L 1 14 *Melast.*  
sparse low brush or "paramo"  
on wide flat bench
- L 2 15 *Berberis*  
rare in sparse low brush or  
"paramo" on wide flat bench
- L 1 16 *Lobelia Tenara*  
fairly common in sparse low  
brush or "paramo" on wide  
flat bench
- L 2 17 *Halenia*  
small colony in sparse  
low brush or "paramo" on wide  
flat bench.
- L 1 18 *Graphalium*  
rare in sparse low brush  
or "paramo" on wide flat bench
- L 1 19 *Gentiana*  
rare in sparse low brush  
or "paramo" on wide flat bench
- L 2 20 *Hedyotis*  
common in sparse low brush  
or "paramo" on wide flat bench.

- shrub 3-4 dm. tall, fls.  
rose, sticky, anthers  
cream-color, filaments  
pink, turning red.  
low, spreading, fls. white.
- erect, flowers bright purple.
- shrub, m. tall, fruit dull  
dark red.
- shrub, m. tall, leaves stiff,  
revolute, white beneath,  
fruit dark blue, glaucous.  
calyx deep purple-black,  
corolla blue-lavender.
- fls. greenish white.
- erect
- fls. varying shades of purple.
- shrub 3-4 dm. tall, bushy,  
buds purple, fls. white  
or very pale lavender inside,  
purplish outside.



20221

*Digitalis purpurea*

common weed in sparse  
low brush or "paramo", also  
common along roadsides

Feb. 28 - eastern slope of  
Cordillera Oriental,

on road to Villavicencio  
above and of Chiriquí,  
~~at~~ just below Parícut  
la Cruz Verde, Cundinamarca  
sparse brush, 3300 m.  
transition between "paramo"  
and "subparamo", on sloping  
bench.

22

*Hedyotis*

common

23

*Vicia*

rare

24

*Melastoma*

common

25

*Cup*

scattered

26

*Ranunculus*

common locally in grassy spots

27

*Hypericum*

common locally in open spots

28

*Hypericum*

common

erect herb, up to 1.5 m. tall,  
fls. bright purple, varying  
to white.

shrub 0.5 m. tall, buds  
purplish, fls. purplish  
outside, white or pale  
lavender inside, leaves  
stiff, with a white band  
beneath.

several spreading, vine-like  
stems from common root,

fls. purple  
shrub 1 m. tall, fls.

magenta, buds sticky,  
fls. bright yellow

fls. bright yellow, leaves  
tending to be vertical,  
fls. yellow

erect shrub 0.5 - 1 m. tall,  
leaves conspicuously 4-ranked,  
fls. bright yellow.



20229

Lup

small colony in open place

30

rare

31

Valeriana  
scattered

32

Lycopodium  
scattered in colonies

33

Palicourea  
~~not common~~ occasional

34

Acaena  
common, especially in grazed  
places

35

~~Pauciflora~~ Gaultheria  
common

36

Paepalanthus  
common in wet places

37

Aechmea  
scattered, terrestrial

38

Valeriana

39

Plectranthus  
common, especially in wet places

40

Castilleja  
rare, in grazed places

41

~~Castilleja~~

41

Castilleja

ligules white inside, with  
purplish stripes outside,  
edible yellow.shrub 1 m. tall, ~~fruit~~  
oily-aromatic when  
broken, fruit green.  
somewhat caespitose,  
fls. white, inflorescence  
dull, dusty-purple  
extensively creepingshrub about 1 m. tall,  
leaves paler beneath,  
fruits <sup>light dark</sup> blue-green  
low spreading bushy  
shrubstiff densely branched  
shrub 1 m. tall, fruits  
turning purplish.  
rosettes almost acaulescent,  
heads gray.scapes erect or almost  
so, fls. bright chrome yellow,  
probably same as #20231, but  
rosettes smaller. flowers  
white, infl. purplish  
rhizomes short, erect  
buds erect.tips of bracts red,  
pubescence glistening  
white.aromatic when broken,  
fls. white.



- 20242 *Castilleja*  
 scattered  
 43 *Juncus*  
 rare (only one seen) in wet places  
 44 *Carex*  
 rare (only one seen) in wet places  
 45 *Lobelia tenera*  
 small colony growing in  
 a clump of spiny bromeliads  
 46 *Carex*  
 rare, one clump seen  
 47 *Alchemilla*  
 scattered  
 48 ~~*Geranium*~~ *Alchemilla*  
 very common  
 49 *Geranium*  
 common  
 50 *Rubus*  
 common  
 51 *Castilleja*  
 rare (only one seen)  
 52 *Cerastium*  
 occasional  
 53 *Carex*  
 rare  
 54 *Heliconia*  
 small colony  
 55 *Pernettya*  
 common  
 56 *Hypericum*  
 common locally  
 57 *Bidens*  
 58 *Geranium*  
 common in open places

- tips of bracts red, calyx  
 red, edged with yellow,  
 yellow inside, galea  
 green, lower edge yellow.  
 small tuft.  
 calyx purplish-black,  
 corolla purple  
 caespitose, culms  
 spreading - arching.  
 dense bush 1.5 m. tall,  
 fruit green.  
 scapes weakly ascending,  
 fls. rose with darker veins,  
 spreading, low-arching  
 bush, fls. pink.  
 suffrutescent; tips of  
 bracts and calyx red.  
 climbing in clumps  
 of bushes, fls. white.  
 bush 1 m. tall, fls. yellow.  
 creeping, more or less prostrate  
 low shrub, leaves pale  
 beneath, fruit black.  
 bush up to 1 m. tall,  
 fls. yellow.  
 fls. yellow.  
 fls. pink



L 20259

Labi.

rare

L 60 Eupatorium  
commonL 61 Galium  
occasionalL 62 (Melast.)  
commonL 63 ~~Croton~~  
very commonL 64 Liatrum  
occasionalL 65 Melast.  
commonL 66 Cestrum  
occasionalL 67 Palicourea  
occasional

Feb. 28 - eastern slope of  
Cordillera Oriental on road  
to Villavicencio, above and  
of Chipaque, below  
Passo de la Cruz Verde, Cundinamarca  
remnants of "subparamo" [3250m.  
a bush between cleared patches,  
on ~~steep~~ slopes.

L 68 Boreia  
common along road cuts

scandent shrub, several  
m. long, corolla deep orange,  
column whitish, anthers  
dull blue-black, fruit green,  
depressed-globose.

- weak shrub, stems  
spreading to ascending,  
fls. white.

- vine-like, fruits fleshy,  
orange.

- shrub 1.5 m. tall, sticky,  
bracts red-purple.

- rounded, densely branched  
shrub, fls. whitish.

- vine-like, fls. bright  
yellow.

- shrub 2-3 m. tall,  
fls. deep red.

- shrub 1 m. tall, fls.  
greenish-white.

- shrub 1 m. tall, fls. dull  
yellow. (probably same  
as 20233)

vine hanging over road  
cut, fls. white.



L 70269 *Pernettya*  
L 70 *Calceolaria mexicana* Benth. subsp. *mexicana*  
wet ground around spring

L 71 *Drymaria*  
wet ground around spring

L 72 *Graphalium*  
common

L 73 *Gaultheria*  
common

L 74 *Rubus*  
common

L 75 *Bocconia*  
occasional but just  
at this altitude

L 76 *Castilleja*  
common

L 77 *Nertera granadensis* (L.f.) Bruce  
common on cut banks

Mar. 7 - from train. Girardot to  
Ibague, Tolima.

An interesting river Arroyo  
on Rio Coello above Gualanday.  
Above this, clear to

Det. Malme  
1962  
low shrub, fruits black.  
~~not ground around spring~~  
plant succulent, reddish,  
fls. yellow.

plants spreading to ascending,  
petals white, bifid.

weak, elongate extensively

branched herb,  
weak shrub, fruits  
black, fleshy.

low spreading shrub,  
fls. white, fruit black  
when ripe. sour.

tree-like shrub, 4 m.  
tall, latex range,  
not abundant, leaves  
blue-glaucous beneath,  
inflorescences pendent  
with ascending fruits.  
these not quite mature.

supfruticent, 1 m. tall  
distal half of bracts  
and calyx red, galea  
green, edged below with  
orange-yellow.

prostrate, mat-forming,  
fls. greenish-yellow,  
fruits bright coral red.

Ibague is a tremendous  
flat plain or savanna,  
similar to that of Bogota, but  
at a little less than 1000 m.  
Ibague is at the foot of the Mts.  
above this plain.



Mar. 7 - ~~sp.~~ Cordillera Central between Ibagué and Armenia.

The road winds through a pass, south of the Quindío, going over the hump at 10500 ft.

The mountains are quite rugged and the canyons deep.

The vegetation has been practically destroyed within sight of the road. Overgrazing is not extreme, yet.

There are no paramos in sight of the road, even at the top.

Palms, which may be *Ceroxylon*, still exist near the top, where a little forest is left.

Along the road cuts several species of orchids are remarkably abundant and showy. *Condaminea* is one of the commonest plants, flowering when only a small shrub, and behaving like a weed.

More trees ~~are~~ remain on the west slope than on the east. *Quercus* sp. is still found along the road.

On the whole trip, not a single *Cinchona* or *Ladenbergia* was seen.

Mar. 7 - Between Armenia and Zarzal bamboo is so abundant as to dominate the landscape.

Mar. 9 - Along the railroad from Cali to Popayan.

Between Cali and Timbó the Cauca Valley is much like that of the Magdalena above Girardot, flat, mostly pasture, with scattered trees and wooded stream-courses. Much bamboo near the streams. From Suarez, the train climbs up to a rolling plateau at about 1400-1700 m. North of Morales, the wooded ravines and steep places are covered with second growth, one of the dominant plants being *Ladenbergia magnifolia*. South of Morales this became scarcer and *Cinchona pubescens* appeared and became extremely common in second-growth and along fence-rows as far as Piendamó and on toward Popayan. It is especially common at about 1700 m. west of Tunia. The plants were flowering and fruiting abundantly, and had erect stipules.

abundantly  
fruiting



Mar. 14 - <sup>near</sup> Rio Molino about 6 km.  
above (s.e.) Popayan, Cauca  
1900 m.

- L 20278 *Cinchona pubescens* Vahl  
~~small tree~~ common in  
small patch of woods  
in ravine. ~~else~~

Mar. 14 - vicinity of confluence  
of Rio Anambio and Rio Vinagre,  
about 2.5 km. w. of Purace, about  
22 km. e. s.e. of Popayan, Cauca  
road cuts on L 2400-2500 m.  
cleared canyon walls with  
some scattered second. growth

- L 79 *Franseria*  
L 80 *Pellaea ternifolia*  
vertical banks  
L 81 *Pellaea*  
vertical banks  
L 82 *Cheilanthes*  
vertical banks  
L 83 *Pityrogramma*  
vertical banks  
L 84 *Asplenium*  
vertical banks

anal. Haller  
q + c 7  
ci 1.6  
qui 7  
tc 1.6

small tree 7 m. tall,  
(others larger) 10 cm. thick, fls. pink,  
pale inside, coral outside,  
hairs on lobes white,  
~~step~~ leaves dull above,  
veins red, <sup>beneath</sup> stipules  
erect, turning red with  
age, inflorescences, fruits  
and, to some extent, leaves  
covered with rust blisters.  
Bark white when cut,  
oxidizing brown, bitter.  
(bark sample) "requeson"

aromatic herb 1.5 m. tall,  
forming thickets

fronds whitish beneath

fronds very white beneath.



20285 Pellaea

vertical banks

86 Tephrosia

87

88 Coriaria

vertical banks

89

90 Dahlia

abundant on slopes and embankments

91 Tagetes

common on disturbed slopes and embankments

92 Besleria

crevices in vertical rock cut

93 Eupatorium

erect herb up to 1 m. tall, corolla violet, calyx deep red. Said to be very useful as an insecticide. shrub 2 m. tall, main stem erect, slender, floriferous branches horizontal and drooping; stigmas dark red.

"yuco"

drooping, branchlets and leaves distichous, fertile branchlets pendent, fls. red with yellow stamens, fruit dark purple-brown.

erect herb, woody at base, fls. pinkish to white.

erect herb 2 m. tall, ~~fls.~~ rays lavender, disk yellow.

erect herb with a very strong oily-resinous odor, rays white (with no. 20294) plant tinged with red, especially the inflorescence, corolla lavender with green lobes, these spotted inside with deep purple. fls. pale beneath. erect, fls. white.



- 20299 *Tagetes*  
very common on embankments  
and disturbed places.
- 95 *Richardia*  
roadside
- 96 *Lupinus*  
rocky place above road, <sup>forming colonies</sup> ~~abundant~~  
very locally.
- 97 ~~*Solanum*~~ *Euphorbia latayi* HBK.  
very common, used as  
living fence from Popayan  
to Puracé, large trees  
occasional in second growth.

Mar. 14 - ~~between Rio Molino~~  
~~and Rio Cauca~~. Road from  
Popayan to Puracé, near  
Rio Molino, 15 km. s.e. of  
Popayan, Cauca. 2100 m.

98 *Solanum*  
common in bushy ravine

Mar. 14 - Puracé, Cauca  
in the town 2646 m.

99 *Eugenia*  
cultivated

- erect, strongly oily-resin  
scented, fls. orange.  
(with #20291)  
prostrate, fls. white,  
5-6 parted.  
erect herb, flowers violet,  
center wedge of banner  
pink, turning red.  
shrub, cut back  
at top, very milky  
when broken, capsules  
immature (fruit from  
different plant from  
flowers. "Lechero"  
plant has slight odor of mercaptan

*laevifolia*

bushy shrub up to 1.5  
m. tall, stem prickly,  
fls. yellowish, but  
~~app~~ apparently mostly  
abortive, fruit immature.  
(immature fruit used  
as a ~~rep~~ soap).

small tree, ~~fls~~ leaves  
glossy, fruit said to  
be small (1 cm.) and  
edible.



20300

*Cinchona pitayensis*

~~tree~~ planted in yard,  
said to have been brought  
from the woods nearby

anal. Dally  
B+C 1.4%  
Ca 3.7%  
Fe 1.1%  
Te 6.4%

Te 3.7%

L 01

in yard

L 02

*Cinchona pitayensis*

in fence-row, possibly planted

L 03

*Fuchsia*

fence-row

tree about 8 m tall, 15 cm  
thick, leaves dark green,  
stiff, glossy, veins scarcely  
reddish, infl. reddish,  
calyx red, corolla dull  
purple, becoming red  
and larger toward  
base, hair on inside  
of lobes white, lobes 4-5(?),  
this plant longistylous.  
stipules green, erect.  
fruit slightly compressed  
perpendicularly to septum,  
somewhat immature,  
some high in tree apparently  
opening from apex.

Bark gray outside, white  
and bitter within when  
fresh, over 1 cm. thick, firm.

(bark sample)

small tree, fls. white, <sup>fragrant</sup>  
infl. dull purple.

small tree 6 m. tall, 3 cm. thick,  
leaves rather stiff + glossy,  
midrib and petiole red,  
stipules erect, turning  
red when old, inflorescence  
and twigs <sup>dark</sup> red, calyx green  
turning red, corolla dull  
purple, hairs white, fruit  
not mature, slightly

compressed: fls. brevistylous.  
semi-scandent shrub up to  
3 m. tall, fls. <sup>some</sup> vermillion, <sup>pendent</sup>,  
fruit immature, leaves dull green.



March 19, Piendamó, 24 km.  
n.n.w. of Popayan, Cauca  
1750 m.

20304 *Heliconia popayanensis*  
second growth thickets on  
steep slope below road

05 *Borreria*  
almost vertical road cut  
cut in earth.

06 *Borreria*  
almost vertical road cut  
in earth.

07 *Anemone*  
almost vertical road cut  
in earth.

Finca El Salado.

March 19 - Rio Machete near  
its confluence with Rio  
Piendamó, 25 km. n. of Popayan,  
Cauca 1750-1800 m.

sparse forest which has  
had all large trees removed  
by lumbering.

08 *Borreria*  
terrestrial

09 *Borreria*  
scattered, not common

tree 6 m. tall, 10 cm. thick,  
fls. greenish. bark  
tough sap glutinous.  
fls. white

procumbent, leaves in  
one horizontal plane,  
flowers on under side  
of stem, hidden, green  
with purple markings  
on inside of petals and  
on ~~top~~ column.  
erect, unbranched or sparsely  
branched 0.5 - 1 m. tall,  
fruit blue when almost  
ripe, black when ripe, fleshy.  
stones 1-seeded, calyx + bracts reddish.



70310

mushy

11

mushy

12

in thick humus, apparently saprophytic

abundant very locally.

13

Befaria

on ridge top, rather bushy woods.

14

Baccharis

on ridge top, rather bushy woods.

15

Myrsine

on ridge top, rather bushy woods.

16

Miconia

on ridge top, rather bushy woods.

17

Pernettya

on ridge top, rather bushy woods.

18

Weinmannia

common on ridge top, rather bushy woods.

19

Lycopodium

very abundant in places, forming a dense groundcover.

20

Palicourea

common

weak sparsely branched shrub. fruits ~~are~~ blue-black, said to be eaten by children. fl. pink, lvs said to be medicinal. plant whitish, flowers ~~are~~ yellow.

shrub 1.5 m. tall (others seen as much as 4 m.) flowers bright pink, paler inside, lvs. glaucous beneath. fl. not sticky. shrub 1.5 m. tall.

shrub 2 m. tall. ripe fruit reddish-black. shrub 1.5 m. tall, fruit fleshy blue-green.

shrub 1 m. tall, lvs stiff, dark green above, pale and reticulate below, fls. white, waxy shrub 2 m. tall, others form trees.

creeping, fruiting branches erect.

shrub or small tree, 4 m. tall, infl. red, pedicels paler, yellowish, ripe fruits black, most of fruits green.



20321

common in more or less open,  
rather sterile or disturbed places,  
terrestrial

22

epiphytic on shrub near ground.

23

Terrestrial

24

Piper

ravine, near water

25

26

Coccytholium

common as ground cover

27

scattered

28

Palicourea

common, edge of clearing

29

Hedyosmum

edge of clearing

30

31

Palicourea

erect, up to 1.5 m. tall,  
fls. white with yellow  
on lower ~~side~~ part of lip.

fls. greenish yellow.

fls. borne on tall canes  
2-3 m. high, from large  
caudex and dense root  
system. petals rose-pink,  
lip maroon-purple, paler  
around the crisped edge.

shrub 4 m. tall, leaves  
extremely rugose, spikes  
pendent.

tree 8 m. tall, fruit green.

prostrate, tips ascending,  
fls. lavender, fruit blue,  
pyriform, fleshy.

shrub 4 m. tall (other  
trees), with oily odor when  
broken, fls. reddish-cream  
color, style green.

shrub 2 m. tall, infl. red,  
fruit green.

shrub 4 m. tall, leaves  
with an aromatic, faintly  
unpleasant odor when  
broken, stigmas translucent.

tree with weak drooping  
lower branches, calyx red,

fruit

shrub 3 m. tall, inflorescence  
purple, fruit green



20332

Fol.

shaded place near stream

L 5 33

*Cephaelis*~~near~~ in ravine

L 7 34

low ground

L 7 35

*Weinmannia*

common

L 2 36

*Ptilinopus*

o

L 11 37

*Cinchona pubescens* Vahl.

common, especially in open places and near clearings.

✓ Mar. 19 - about 3 km. s. of Piendamó,  
21 km. n.n.w. of Popayan, Cauca.  
hilltop with bushy  
second growth. 1850 m.

L 1 38

*Boueria*

bare road cut

L 1 39

*Lycopodium*

mass, spot.

flowers scarlet.

shrub 1.5 m. tall, stems  
green, bracts deep purple,  
fruit green.

shrub or small tree,  
branches with tendency  
to be drooping or scandent.  
fls. greenish, fruit  
white, pendent. "granizo"  
(inflorescences actually in  
leaves)

Tree 8 m. tall, bark  
used for tanning "encenillo."

shrub 2.5 m. tall,  
infl. and calyx deep red,  
corolla purplish white, waxy.

Anal. Ballis:  
mass of  
*Cinchona*  
athaboids.

tree 10 m. tall, leaves  
dull above, roseate beneath,  
veins red beneath,  
fls. pinkish inside,  
with white hairs,  
coral outside, fragrant.  
stipules erect, green to red.  
bark about 1 cm. or more  
thick, whitish when cut,  
oxidizing red-brown (bark sample)

fls. white

fls. yellow



70340

Mimosa  
common

41

Mimosa  
common

"cacaobara" is very abundant in many places. Along the river it forms great brakes, and in upland ravines smaller ones. The canes are used in house construction, especially to build the roof of the house. It is the chief part of the title.

Mar. 23 - Road from Popayan to La Union, Nariño.

The entire way is either cultivated or in pasture. A few *Cinchona pubescens* seen in the first few km. s. of Popayan. The lower flat portions of the Rio Patia drainage, north of Mercaderes, are dry and sterile. Palms are noticeably absent here. The region around Mercaderes is one vast pasture.

The valley around La Union is devoted to sugar cane, corn and "iraca" (*Carludovica palmata*). The latter is the basis of one of the principal occupations here, the making of Panama hats. Great numbers of the people participate in this in one way or another. The pay to the ones who actually weave the hats is extremely small, and Dr. Moquegua says the occupation should be abolished because of its effect on the people. The young leaves of the

semi-scandent shrub, fls. pinkish-lavender, fruit immature. erect or ascending, occasionally arched and rooting at tip, fls. orange-yellow, leaves fleshy. Iraca are prepared by cooking them before they are split into strips of varying widths. The hats as made are not perfectly white, but afterward they are bleached and whitened with a milky suspension of sulfur. They range in price from 1 ps. to 15, here. The price is determined by the fineness of weave.

Mar. 24 - Road from La Union to Pasto, Nariño.

Just s. of La Union, at 6000' saw a few scattered *Cinchona pubescens*. This region is all cleared, though at 8000-8500' it has reverted in places to a sub-paramo bush.

Just north of Pasto the mountains contain forest that is little disturbed. Would be good collecting. In the valley of Pasto the land is almost completely cultivated.



✓ Mar. 26: <sup>near</sup> grade above Encano, above  
La Cocha, western part of Putumayo  
road cut in cloud forest 2950 m.

20342 *Trichomanes*

✓ Mar. 26 <sup>near</sup> Paramo de San Antonio  
(San Bernardo), between Encano  
and Santiago, western Putumayo  
road cut in subparamo (bushy)  
vegetation

43 *Fuchsia*

44

45 *Nertera* <sup>latifolia</sup>  
on earth banks

✓ Mar. 27 - Sachamates, drainage of  
Rio Mocho, opposite mouth of Quebrada  
Patoyaco, Camino Herradura, 18 km.  
w. of Mocho, Putumayo 1700-1800 m.  
Rain forest on steep slope, with  
small clearing.

46

edge of deep ravine

47

edge of clearing

48 *Calceolaria*

small trickle of water along trail

49 *Plantago major*

clearing

50

mossy bank along trail, terrestrial

51 *Borreria*

clearing along trail

fronds appressed to earth walls.

- fls. rose-pink, pendent  
- fronds arching downward.  
prostrate, forming mats,  
fls. pale green, fruit red.  
leaves stiff

anal. Bellis  
not more  
than trace of  
Cuscuta alk.

tree 20 m. tall, <sup>3 dm. thick</sup> very bushy  
at top and dense. "tuna" being  
harvested as a quina. (bark sample)  
small bushy tree, fls. white  
with rose purple stamens  
corolla sulfur-yellow.

"yaben" used as remedy  
for infections.  
fls. white.

fls. white



- 20352 *Cuphea*  
common weed along trail
- L 53 *Blechnum*
- L 54 *Pol.*
- L 55 *Pol.*  
in deep shade
- L 56 *Palicourea*
- L 57 *Billia*
- L 58 *Ladenbergia*
- L 59 *Asplenium*  
in humus, occasionally climbing  
on lower parts of trees
- L 60 *Vittaria*  
epiphytic on tree trunk
- L 61 *Pol.*  
in deep forest
- L 62 *Cephaelis axillaris*  
in deep forest
- L 63 *Ladenbergia*  
in deep forest
- L 64 *Blechnum*  
in deep forest, common
- L 65 *Gleichenia*  
edge of clearing

- calyx deep red, corolla  
pink.
- rhizome <sup>rather</sup> short, erect.  
shrub 1 m. tall, stem  
speckled, fruit immature.
- weak shrub, corolla fleshy,  
orange-red, pouch-like, with  
small opening.
- shrub 3 m. tall, infl. purple,  
fruit immature
- Anal. bellies  
not more  
than traces  
of linchong alkal.  
tall tree, 30 m. 4 dm. thick,  
"naranja" <sup>bark</sup> being harvested as  
a quina (Bark sample)  
from a tree that had been cut several  
days. bark being harvested  
as a quina bark. "requezon"  
long naked tips of fronds  
rooting and developing new  
plants.
- shrub 4 m. tall, slender,  
fruits immature.
- weak shrub, fruit blue,  
fleshy, obovoid.
- small sprout "requezon"  
bark being harvested as quina.
- rhizome elongate, climbing  
trees, closely appressed to  
trunk, sterile fronds in  
stories, with gaps of bare  
rhizome between, fertile  
fronds terminal.
- stip erect, blades arcuate, more or  
less flat tipped, revolute. forming low thickets.



✓ Mar. 28 - Drainage of Rio Mocoa,  
below Sachamates, below  
mouth of quebrada Patoyaco,  
Camino Herradura 17 km. w. of  
Mocoa, Putumayo 1600 m.  
trail along steep canyon  
side, rain forest.

20366 *Guettarda*  
in small ravine

67 *Drymaria cordata*  
cleared space beside trail

68 *Gynandropsis*  
cleared space beside trail

69 *Kohleria* sp. nov. det. Wiehler 1972  
cleared space beside trail

70 *Lasiacis*  
base of cliff

71 *Psychotria*  
second growth on steep slope  
abundant locally

72 *Palicourea*  
rocky slope at base of cliff, shaded

73 *Palicourea*  
rocky slope at base of cliff, shaded

small tree 6 m. tall, wood  
brittle, fls. white, edges of  
lobes crisped, fruit immature.  
stems prostrate at base,  
ascending through weeds.  
fls. white

herb 2 m. tall, fls. orange  
with green stamens,  
fruit green, valves  
curving on dehiscence,  
exposing fleshy  
placenta and blackish seeds.

weak suffrutescent  
herb, fls. deep scarlet,  
marked with purple in  
throat.

forming low tangles.

shrub 4 m. tall, fruit  
dull translucent blue.

inflorescence yellow,  
fruit immature

suffrutescent herb, 3 dm. tall,  
fls. white, fruit immature.



Mar. 28 - ridge above Sachamates,  
drainage of Rio Mucua, opposite  
mouth of Quebrada Patoyaco,  
18 km. w. of Mucua, Putumayo  
1750 - 1900 m.

Rain forest

20374 *Cinchona officinalis* L.  
on edge of precipice, only one seen

Anal. Bellis  
no more than  
traces of  
*Cinchona alkaloids*

75

76

77 *Ladenbergia*?  
edge of precipice

78 *Burmeistera*

~~dense~~ woods, along trail

1400 m.

tree 15 ft. tall, 2 dm. thick  
at base, leaves glossy, old  
ones bright red, stipules  
erect, pale green, flowers  
purple (only one open) calyxes  
and immature fruits deep  
red. Bark corky and rough  
outside on trunk, 2 cm. thick,  
white inside oxidizing  
brown, gray on branches  
and checked, 1 cm. or less  
thick. (bark sample)

Anal. Bellis  
not more  
than traces  
of *Cinchona*  
alkaloids

large tree 40 m. tall, 6 dm. thick,  
wood brown at center, hard,  
outer wood rose color, leaves  
stiff, bark thick, red, bitter,  
being harvested as quina,  
called "calisaya" or "casarillo"  
(bark sample).

Tree, lactiferous, fruit immature,  
sprouts from a fallen tree, not  
seen fertile.

suffrutescent herb 2 m. tall,  
with an elusive shrub-like  
odor, fls. pale green, touched  
with brownish outside,  
fruits inflated



20379

Lili.

along trail in woods and at  
edge of clearing.

30 *Ladenbergia*  
dense woods

31 *Psychotria*  
dense woods

32 *Hymenophyllum*  
epiphytic on tree trunks

33 *Psychotria*  
in woods

34 *Acalypha*  
in woods

35 *Ge...*  
edge of clearing

36 *Ac...*  
small colony in edge of clearing

37 *Herb*  
isolated plant in clearing

38 *Centamirea corymbosa*  
in clearing at edge of ravine

39 *Burmeistera*  
in clearing, wet place

40 *B...*  
at edge of clearing

scandent shrub, lactiferous,  
fls. scarlet outside, orange  
inside, calyx dark red,  
stamens yellow, fls.

born on long pendent  
almost naked branches.

tree 20 dm. tall, 3 dm. thick,  
fruits all dry. bark being  
harvested as a quina.

"requeson". (bark sample)  
shrub 2 m. tall, stipules  
divergent, fleshy, fruit  
white.  
pendent.

shrub 1 m. tall, fruit immature.

slender, sparsely  
branched shrub 3 m.  
tall, inflorescences weak,  
styles white.

low suffrutescent herb,  
fls. white.

erect, forming a dense  
patch, fls. white.

tree-like shrub 4 m. tall,  
no fruits in inflorescences.

small sterile plant -  
said to be "barniz de Pacho".

herb 1 m. tall, fls. green  
with brownish tinge  
plant with elusive skunky  
odor.

semi-scandent shrub.

Anal. Salts  
no more  
than traces  
of Cinchona alk.



March 29 - ~~Putumayo~~ Rio Luauanga,  
drainage of Rio Mocoa, above  
mouth of Rio Patoyaco, 18-20  
km. w. of Mocoa, Putumayo.  
second growth in cleared  
trail-side in rain forest.

20391

*Siparuna*

92

*Siparuna*

93

*Palicourea*

94

*Gynerpodium*

wet rocky cliff in sparse vegetation

95

*Fuchsia*

abundant from here up to 2050 m.

1700 m

shrub, sparsely branched,  
branches quadrangular,  
elongate, ~~the~~ foliage  
with a slightly aromatic  
slightly unpleasant  
odor, fruits pyriform,  
flesh colored, papillate,  
occurring in axils  
of leaves and in clusters  
on lower part of branches,  
pendent. leaves very rugose.  
slender shrub, fruit spherical,  
greenish-red, smooth,  
leaves almost smooth,  
plant with a rather  
weak unpleasant  
aromatic odor.

shrub 2-3 m. tall, infl.  
yellow, pendent, fruit  
immature.

1875 m.

erect.

2000 m

low bush, 1 m. long but weak,  
fls. scarlet, fruit purple-black,  
fleshy. leaves rugose.



20396

*Leucaena*

common in clearing

97 *Bomarea*

scattered in brush

98

*Passiflora*

epiphytic on mossy tree trunk

99 *Cinchona pubescens* Vahl

on steep rocky slope in wet forest

Mar. 29 - Upper part of Rio Minchory,  
drainage of Rio Moron,

2500 m

20400

*Epilobium*sandy patch in rocky  
stream bed01 *Fuchsia*along rocky stream bed,  
abundant also along cleared  
sides of trail in second growth02 *Gunnera*scattered in woods from  
here to summit, growing  
with another much commoner  
species.03 *Orchid*

on rocky cut banks above trail, abundant

Mar. 29 - small affluent  
of Rio  
Putumayo, along Camino Herradura  
(to Moron), above San Francisco,  
Putumayo

2500 m

04

*Capipazan*herb up to 1 m. tall, with  
powerful stinging hairs,  
petals orange.  
flowers scarlet.  
plant semiscandent.anal. Bellis.  
gTC 0.6  
Si 0.7  
TC 1.4Tree 10 m. tall, 3 dm. thick,  
older leaves reddish, especially  
beneath, leaves with a  
mildew of some sort. stipules  
green, reflexed. (dark sample)  
erect, flowers white,  
turning pinkish, calyx  
greenish red.weak shrub 1 m. long,  
flowers scarlet, ripe  
fruit purplish black, fleshy.trunk erect, 1 m. tall, 2 dm.  
thick, leaves ascending,  
infl. ascending.

fl. white.

suffrutescent herb with rather  
rank odor, 3 m. tall, fl. yellow-  
green, stamens purple distally.



✓ Mar. 30 - Sibundoy, Valle de  
Sibundoy, Putumayo 2200 m.

20405

*Marimacra*

edge of cultivated plot

L 06

in garden near house of  
an Indian herb doctor

✓ April 2 - Encano, north end of  
Laguna de la Cocha, Putumayo  
partially cleared 2850 m.  
foothills above the lake,  
formerly dense rain forest,  
patches now remain.

L 07

patch of brush on a low ridge

L 08

parasitic on various plants,  
principally compositae

L 09

pendent over edge of road  
cut (other plants on  
flat roadsides)

L 10

*Oxalis*  
cultivated on cleared slopes  
in rich black soil

shrub, fls. blue

erect shrub 3-4 m tall,  
flowers white, ~~some~~  
somewhat irregular.  
Plant apparently sterile,  
as old flowers seem to  
drop off, and the people  
say it never sets fruit.  
"culebra barrachero".  
Planted here, not seen wild.

shrub 11 m. tall, fls.  
cream color, slightly reddish  
outside.

leafless, stems brownish  
purple, fls. open wide,  
white, pinkish & outside  
prostrate, forming a  
mat, fls. white.

stem and leaves rather  
fleshy, fls. yellow. roots  
yield tubers which are eaten  
like potatoes, called ~~oca~~ "oca"  
mature in 9 or 10 months here.



20411

cut bank of road

- 12 *Oenothera*  
grassy bank
- 13 *Weinmannia*  
patch of woods on steep slope
- 14 *Cinchona pitayensis* Wedd.  
patch of woods on steep  
slope, scattered in the region.
- 15 *Vittaria*  
epiphytic on mossy tree trunk
- 16 *Gentiana*  
roadside bank
- 17 *Galium*  
bush along trail
- 18 *Palicourea*  
in patch of woods
- 19  
in patch of woods
- 20 *Psychotria*  
in patch of woods
- 21  
bush along trail, abundant

herb 1 m. long, drooping  
over bank, fls. white with  
reddish marks outside  
basally.

spreading from a thick  
root, fls. scarlet,  
yellow distally.  
shrub 3 m. tall.

anal. Ballis:  
G.C. 1.9%  
Ci. 2.39%  
Gru. 0.17%  
T.C. 4.5%

tree 10 m. tall, 1.5 dm. thick.  
all fruits apparently opening  
from summit. Bark being  
harvested. (bark sample).

- pendent, fronds rather  
thick and slightly spongy.  
fls. ~~deep~~ deep lavender,  
~~petals~~ corolla lobes  
reflexed in mature fls.  
vine-like, very scabrous.  
fls. greenish, fruit dark brown.  
shrub 3 m. tall, infl.
- purplish, fls. bluish.  
vine-like ~~herb~~ suff-  
frutescent herb, lactiferous  
fls. reddish green, fruits  
pink, somewhat inflated.  
shrub 2.5 m. tall, fls.  
purple outside, lavender  
within, <sup>mature</sup> fruit bright blue,  
fleshy, mostly immature.  
shrub 2 m. tall, fls.  
bright purple.



134

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20472

*Thalictrum*L 23 *Cyclanthera cypripedifolia* Cogn. det. Jeffrey 1974brushy ~~trailside~~ trailside

3 24

*Tropaeolum*

brushy trailside

L 25

*Delonix*

L 26

*Delonix*

weed cultivated slope

L 27

*Viola*weed in pasture, probably  
escaped from gardens

L 28

*Liparuna*

tree in fence-row on hill

L 29

*Delonix*

fence-row on hill

L 30

*Delonix*~~Delonix~~

Putumayo

135

herb, 1 m. tall, fls. purple.

herbaceous vine climbing  
in small trees, fruits  
dehiscing in 3 valves  
when still green, fls.  
greenish white.herbaceous vine  
climbing in brush,  
fls. with spur coral red  
with tip green, lobes  
green, petals deep  
maroon - purple.

fls. flame-orange

bushy herb, 1 m. tall and  
wide, tangled, calyx  
purple-black, corolla  
greenish-white, fruit  
reddish when ripe.upper petals purple-black,  
lower ones variously white,  
yellowish or lavender,  
marked with purple.tree 6 m. tall, calyx  
waxy, yellow, turning  
green, plant aromatic,  
somewhat like lemon oil,  
leaves very rugose,  
no fruit setting.vine-like shrub, flowers  
crimson, staminal column  
white, anthers gray.  
fls. ~~reddish~~ variegated  
yellow, brown, and green.



20431 *Fuchsia*  
bushy patches around cultivated slopes.

32 *Cinchona pitayensis*  
bushy patch, edge of cultivated field.

33 *Palicourea*  
bushy slope

34 *Morrenia*  
bushy slope

35 *Galium*  
climbing in bush

36 *Nertera granadensis*  
of moist earth bank

~~Strophopodium~~

April 2 - Grade above Encano,  
Laguna La Cocha, road to Pasto,  
Putumayo 2960 m.  
steep slope below road, cleared.

37 *Lycopodium*

38 *Orchid*

erect suffrutescent herb.  
hypanthium flesh color,  
sepals green, petals scarlet  
fls. pendent. fruit immature

anal. Bellis

Q+C 2.3%

Ei 2.7%

Qui 2.1%

TC 3.8%

(Q904 2.4%)

small tree, obviously  
a grown root sprout,  
5 m. tall, branched from  
near base, base 12 cm. thick.

sterile (bark sample)

shrub 3 m. tall, infl.

deep purple, fls. blue,

infl. fading somewhat

greenish when in immature

fruiting condition.

shrub 1 m. tall, fls. dark  
blue, fruit pinkish.

vine-like, fruits orange,

fleshy.

prostrate, mat-forming,

fls. yellowish-green, fruit

coral red, juicy.

clumps, stems very white,  
leaves green.

scape reclining, fls. chocolate  
brown with yellowish  
crisp edges to petals,  
yellow lips to epichile  
and yellow rugose thickening  
at base of mesophyll. fruit  
triangular transversally.



20439 *Phytolacca*  
common

40

✓ April 2 - near top of grade  
above pasts on road to Putu-  
mayo,

Nariño

wet slopes, "subparamo" 3150 m.  
bushy vegetation

41 *Nertera tetrasperma*

forming dense mat on open  
earth banks, common.

42 *Gaiodendron*

apparently growing in earth

43 *Morrenia*

44 *Stellaria*

edge of road cut

45 *Fuchsia*

46 *Oxalis*

edge of road cut

47

climbing in shrubs

48 *Centropogon*

common

✓ Apr. 4 - La Unión, Nariño 1850 m.

49

in yard near house

fleshy depressed herb,  
fls. magenta  
diffuse, ~~weak~~ weak herb,  
fls. white.

leaves stiff, fruit coral red,  
fleshy.

shrub 4 m. tall, fls.  
yellow, parts spreading  
shrub 1 m. tall, fls. deep  
blue.

diffuse herb, fls. white.

small shrub, flowers  
crimson, pendent.

vine-like herb, fls. yellow,  
marked with red outside,  
stems red.

scandent herb, leaves stiff,  
revolute, fruit purplish-black.  
shrub 1 m. tall, spreading,  
fls. orange, staminal  
column white, anthers  
blue-gray.

large caespitose shrub, 3 m. tall,  
fls. yellow, column bent downward.  
"Escoba babosa" used as betrifuge



✓ Apr. 4 - 7 km. south of La Unión,  
on road to Pasto, Nariño, 2000 m.

20450 *Cuphea*

grassy roadside

L 51 *Cuphea*

grassy roadside

L 52 *Tagetes*

grassy roadside

L 53 *Cinchona pubescens* Vahl

ledge on precipice, side of  
bushy ravine

L 54 *Borreria*

roadside

✓ Apr. 4 - side of valley of Rio Quiro,  
directly across from San Jose,  
Nariño 1950 m.

L 55 *Cinchona pubescens* Vahl

wet ravine

✓ Apr. 3 - Rio Pajajoy, about 7 km. w.  
of Buenaco, Nariño

rocky sides of ravine not far  
above river.

L 56 *Lobelia*

road cut, rare

ascending, fls. pinkish

fls. deep yellow

erect, rays white, disk pale  
yellow. odor like licorice  
when crushed.

small tree, corollas pink,  
deeper outside, with white  
hairs. leaves dull above,  
veins reddish. stipules

erect. fls. fragrant.  
plant spreading to ascending,  
fls. white

shrub 4 m. tall, leaves with  
reddish veins, dull above,  
becoming red with age,  
stipules reddish, erect.  
fls. fragrant, corolla deep rose  
outside, lighter within, with  
white hairs.

fl. dark blue at apex, white  
near base.



20457

road cut

58

*Ficus*

59

*Dodonaea viscosa* L.

60

*Selaginella*road cut, closely adhering to  
rocks, forming a mat.

61

*Hedyotis*

on rocks and earth ledges

April 12 - Ridge bet. headwaters  
of quebrada Silencia and  
quebrada Chupadero, (2 main  
affluents of Rio Timba on  
s. ~~side~~ side nearest source),  
17 km. s.w. of Timba, Cauca  
rain-forest, largely ~~above~~ 2300 m.  
with clearings, ~~steep slope~~

62

*Psychotria*

dense forest, gentle slope

63

*Tiparuna*

dense forest, gentle slope

64

*Cinchona pubescens* Vahldense forest, gentle slope,  
scattered larger trees,  
small ones abundant  
around clearings (stipules erect  
green)

erect, fls. white.

bushy tree 6 m. tall, leaves  
stiff, figs immature,  
speckled with white.shrub 2 m. tall, fls.  
green with reddish stamens,  
fruit slightly inflated.caespitose, spreading to  
erect, fls. white. "romerillo"shrub 1.5 m. tall,  
fls. white, corolla enlarged  
at base, fruit immature.small shrub, 1.5 m. tall,  
~~fragrant~~ aromatic, fruit  
broadly pyriform, red  
with white spots.tree 25 m. tall, 4 dm. thick,  
leaves dull above when  
older, roseate beneath,  
esp. veins, fls. pink, fragrant  
paler inside, hairs white.  
bark 1.5 cm. thick, bitter, slight, scaly (dark area)

anal. bellis.

g+c 5

ci 0.5%

gwi 5

TC 0.5%

"



20465

dense forest, gentle slope

66

dense forest, common

67 *Drymaria cordata* L.

common in clearing

68 *Cinchona pubescens*seedlings and sprouts  
abundant at edge of  
clearing69 *Castilleja*

rare in clearings

70 *Bomarea*scattered in clearings  
and edge of woods71 *Muehlenbeckia tamnifolia*

in clearing

72 *Cinchona pubescens*

seedlings along trail

73 *Palicourea*

woods

74

woods along trail

tree 15 m. tall, 3 dm. thick,  
leaves in one plane on  
twig.leaves in one plane, spotted  
with red toward tip."ataha sangre" used to  
stop bleeding.diffusely spreading,  
infl. erect, fls. white.seedling, these varying  
greatly in hairiness of  
stem, this one is  
extremely hairy (see #20472)stipules erect, green,  
later drooping and  
becoming red.hairs glistening white,  
bracts tipped with  
red, calyx green.vine about 2 m. long,  
twining, fls. orange  
(plants seen more often  
unifl.)

vine, fls. greenish.

seedling, these varying  
in hairiness (see #20468)this one somewhat hairy,  
stipules erect, later  
becoming red and drooping

shrub 2 m. tall, infl.

purple, fruit green.

shrub, fls. or leaves,  
yellowish green, fruit white.



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20475

*Palicourea*  
woods

76

on tree trunk in woods

✓ April 12 - near head of  
Quebrada Silencia, (affluent  
of Rio Timba) 16 km. s.w.  
of Timba, Cauca 1300 m.

77

~~Cordia~~ *Erythrina edulis*  
cultivated, shaded by bananas

78

✓ April 12 - Quebrada Silencia about  
2 km. below source, (affluent  
of Rio Timba), 16 km. s.w. of  
Timba, Cauca 1550 m.  
woods along stream in ravine.

78

Rubi

Cauca

147

shrub 7 m. tall, erect,  
infl. ~~red~~ purplish  
green, fls. lavender.

small tree, with ~~thorny~~  
prickly branches. fls.  
yellowish-green, fruit  
abundant pendent,  
dehiscing while still  
green and while still  
in tree, seeds large,  
dark red-brown,  
soft, ~~green~~ starting  
to germinate while  
still on tree - cooked  
and eaten, have a mealy  
consistency and slightly  
nutty flavor.  
"chacha-fruits" or "chucha-  
fruits"

small tree 5 m. tall, fruit  
immature.



148

20479

1943 - Colombia

shaded in woods

80 *Cephaelis*

shaded in woods

81

shaded in woods

82

*Coccoloba*

cut bank of trail, edge  
of woods, prostrate,  
extensive, rooted at nodes  
fls. lavender, fruit blue  
when ripe.

83

shaded in woods

84

*Rub.*

shaded in woods, only one seen

85

*Bocconia*

rocky bank above stream

Cauca

149

scandent shrub, sterile,  
"crucecita". a piece of the stem  
a few cm. long boiled in water,  
the water then drunk to stop  
menstrual hemorrhages.

(inf. from Ignacio

who got it from a Choco  
Aguero. He and his wife both  
relish for its efficacy).

subshrub, 0.5 m. tall  
or slightly more, bracts  
dark purple, fruit  
fleshy, blue.

slender shrub 2 m. tall,  
fruit immature.

"yerba cancer" good for kidneys

slender shrub 3 m. tall,  
fls. white, leaves  
white beneath.

shrub 8 dm. tall, fruit  
dark blue.

shrub 3 m. tall, leaves  
glaucous beneath  
old infl. with mature  
fruits on stem below  
leaves, young one terminal,  
mature fruits mashed  
with water and used for  
orange-cure. latex orange.



20436 *Liparuma*  
edge of woods

✓ April 13 - Southeast side  
of valley of Quebrada Chupa-  
ders (largest affluent of  
Rio Timba on south side), 16 km.  
w. & w. of Timba, Cauca  
bush along trail, 1300 m.  
damp and shaded

37 *Celastrus*

38 *Rondeletia*  
along trail in <sup>rugely</sup> clearing

39 *Palicourea*  
in patch of woods

✓ April 13 - Ridge between  
lower parts of Quebradas  
Silencio and Chupadero,  
(affluents of Rio Timba),  
about 6 km. w. of Timba,  
Cauca 1500 m.  
cleared ridge, pasture

90 *Coccyzium*  
cut bank ~~off~~ above trail

91 *Polygala*  
~~abundant~~ common in pasture

shrub 4 m. tall, with a  
disagreeable odor; leaves  
very rugose, fls. yellow above.  
fruits not mature but  
turning pinkish.  
"cojon de chucha", leaves  
used for rheumatism.

suffrutescent herb up to  
1 m. tall, fls. scarlet.

latex scanty.

erect shrub 3 m. tall, fls.  
pink, tube deeper pink  
than lobes.

slender erect shrub  
3 m. tall, inflorescence  
coral red, buds yellowish.

fls. white, fruits blue,  
gyniform, soft.  
"yerba de cancer" good for kidneys  
erect, fls. rose.  
"sarpoleta" roots with odor of  
wintergreen.



20492

grt.

scattered in pasture

✓ April 13 - Rio Timba, 5 km.  
above Timba, El Valle  
wet wooded bottom lands, 1000 m.  
mostly with bamboo and  
gynemium.

93 Psychotria

94 ~~Ludwigia~~ fusca  
open marshy place

✓ Apr. 13 - Rio Timba at a  
narrow rocky place  
about 4 km. above  
Timba, El Valle 1000 m.

95 Ladenbergia magnifolia  
second growth woods  
on slope of ravine

96  
second growth woods  
on slope of river bank

97 Psychotria  
second growth woods on  
slope of river bank

✓ Apr. 17 - Rio Timba about  
3 km. above Timba, El Valle  
small marshy place  
in bed of tiny trickle of  
water 1000 m.

98 Xyris  
rare

erect, fls. greenish-white

shrub 2 m. tall,  
fls. white,  
herb 1 m. tall, fls.  
yellow.

tree 10 m tall, 3 dm. thick,  
leaves glossy, bark  
bitter.  
small tree, scaly  
catkins green.

shrub 3 m. tall,  
fls. white, ripe fruit  
red, fleshy.

erect, heads ovoid,  
fls. not seen



70499

70500 Eleocharis

73 ✓ Apr. 17 Samaria, on Rio  
Timba, 2 km. w. of Timba,  
El Valle 1000 m.

L 01 Solanum  
common in pasture

L 02 Gossypium  
cultivated

L 03 Solanum nigrum L.  
weed in pasture

L 04  
weed in pasture

L 05 Portulaca oleracea L.

L 06 Rubus  
in thicket in pasture

L 07 Chenopodium ambrosioides L.  
weed near house

L 08 Repandum  
weed in pasture

L 09 Equisetum  
wooded ravine, second growth

erect, at least the green  
part of stem, leaves  
stiff.  
tufts

shrub 1-2 m. tall, forming  
tangled thickets, fls. white,  
fruit reddish when  
ripe.

~~er~~ "enjacu" evidently  
not eaten by stock.

shrub 2 m. tall, flowers  
yellow, turning red.

fls. white, "infusion"  
used as a disinfectant  
to wash ulcers. "yerba mora".  
fls. greenish white.

"escoba dulce"

fleshy, fls. whitish.

"verdolaga" used to soothe  
irritations.

woody liana climbing  
in tall shrubs.

very strong odor. "paico"  
used for worms.

fl. yellow. "cargoolita"  
used with Equisetum to  
make a kidney medicine.  
erect, 4 m. tall, mostly  
bent over. fruit not seen.



20510

M. 11

edge of guadua thicket near cultivated ground, wet river-bottom land.

11

M. 11

edge of guadua thicket, wet river bottom land.

12

M. 12

*Lantana camara* L.  
thicket in wet river-bottom land

13

M. 13

*Eryngium*  
weed in wet river-bottom land

14

M. 14

*Polygala*  
weed in cultivated river-bottom land.

15

M. 15

*Mollet*  
thickets in wet river-bottom land

16

M. 16

*Desmodium*  
rocky outcrop in cultivated land

17

M. 17

*Viola*  
cultivated land

18

M. 18

*Stylosanthes*  
weedy cultivated land, wet river-bottom land.

erect or reclining, stems conspicuously quadrangular, fleshy, pleasantly acid, fls. bright rose-magenta. "canagua" used to make a refreshing drink for fever patients. slightly oily odor.

shrub 1 m. tall, spreading, aromatic, fls. orange, turning red. "venturosa" or "mumpecha", used for whooping cough. erect, with a foetid oily odor, used to flavor soups and other foods, to which it gives an extremely bad flavor "culantro cimarró". fls. pinkish. root with strong wintergreen odor. "carpolita"

shrub 1.5 m. tall, pubescent reddish, esp. on young parts, fls. white, fruit dark blue when mature. prostrate, fls. indigo.

spreading, fls. white or pinkish white with deep red-purple center. extensively branched herb, basal parts prostrate, elongate, fls. yellow.



- 20519 *Borreria*  
weed in wet cultivated river-bottom land
- 20 *Diodia*  
weed in wet cultivated river-bottom land.
- 21 *Heliconia*  
weed in wet cultivated river-bottom land.
- 22 *Heliconia*  
weed in cultivated land, common
- 23 *Borreria*  
weed in banana patch
- 24 *Peperomia*  
common weed in banana patch
- 25 *Peperomia*  
weed in banana patch
- 26 *Commelina*  
common weed in banana patch
- 27 *Physalis*  
weed in banana patch
- 28 *Stachytarpheta*  
weed in banana patch
- 29 *Croton*  
weed in banana patch
- 30 *Corchorus*  
weed in banana patch
- 31 *Richardia*  
weed in banana patch

Apr. 24 - Bucaramanga, 2000 m. bushy pasture

- 32 *Lasiacis*  
thicket
- 33 *Borreria*
- 34 Verb.

erect or ascending, fls. white

prostrate to erect, stems strongly quadrangular, fls. white, fruit purplish. spreading clumps.

fls. violet.

fls. white

stems fleshy, leaves thin but fleshy. erect, aromatic, fls. purple.

decumbent, petals all blue.

fls. cream color.

erect, fls. bright purple.

erect, green, fls. white.

ascending, fls. yellow.

erect, fls. white.

main culms erect, less than 1 m. tall. branches diffuse.

erect, fls. white.

erect, fls. magenta.



- 20675 Centaurium

- 36 Polizgalan

7 ✓ May 7 - Ipiales airport, about  
5 km. w. of Ipiales, Narino. 2950 m.

grassy field.

- 37 *Eryngium acule*  
common

- 538 Geranium  
common

- 39 Veronica

✓ May 10 - Cali, El Valle, 1000 m.  
roadside weed

- 3 40 *Microtea debilis* Sw.

- 41 Euphorbia

- 42 Amaranthus

- 2 43 *Boerhavia erecta* ?

May 17 - 2 km. n.e. of Aguadita, on  
a small affluent of Rio Barroblanco,  
3 km. n.e. of Fusagasuga,  
Cundinamarca 2150 m.  
second growth woods ~~on edge of~~  
~~wooded ravine~~

- 44 *Palicourea*  
edge of wooded ravine

- 15 45 *Cinchona officinalis* L.

edge of wooded ravine, a number of small trees in a "mancha"

fls. purplish pink.

fls. pink, roots with odor  
of wintergreen.

slight parsley odor, brack  
green outside, whitish

green outside, whitish  
within, flowers white.  
— stems prostrate, fls. pink.  
fls. blue-violet.

— spreading, fls. white, fruit scarious.

flowers greenish.

herb 1 m tall. stem and leaf veins rose-bronze.

several long prostrate  
stems spreading from  
central root, lvs. glaucous-  
pallid beneath, fls. deep pink.

shrub 1.5 m. tall, infl.  
yellow, fruit black. <sup>Fls. somewhat</sup> <sub>glossy</sub>

small tree 7 m. tall, 8 cm. thick.  
fls. dark red-purple with white hairs  
on lobes. (bark sample) <sup>actually reddish</sup> few old leaves red.

|              |       |
|--------------|-------|
| Broad (Belt) |       |
| 920          | 6.6   |
| (4500)       | 1.7   |
| ben          | 1.1   |
| green        | Stems |
| TGA          | 5.8   |



20546

edge of wooded ravine

47

*Cinchona officinalis* ~~pubescens~~  
wooded slope(Bellis says appearance of bark  
is between *officinalis* & *pubescens*.  
possibly more like former)

48

*Fuchsia*

in bushes along trail (2000 m.)

49

*Cinchona officinalis* ~~pubescens~~  
wooded slope

50

*Tournefortia*

wooded slope

51

*Cinchona pubescens* Vahl  
fence row, side of trailweak shrub 2 m. long, ascending,  
fls. orange.

Anal. Bellis:

G+C. 2.0%

Li 1.3%

Gr 0.1%

TGA 2.4%

sterile sapling 4 m. tall,  
branches pendent, appears  
intermediate in leaf shape,  
no. of veins, stipule shape,  
luster of leaves. Both pre-  
sumed parents nearby.

scandent shrub,

fls. pendent, scarlet.

several strong shoots  
5 m. tall from a stump  
1.5 m. tall ~~20~~ 20 cm. diam.looks like *C. officinalis*  
with somewhat large  
leaves and inflorescence  
of *C. pubescens*. Both  
presumed parents nearby.(bark sample) petioles  
& midribs red, old leaves  
bright crimson. (bark sample)

shrub forming thicket

2 m. tall. fruit immature.

small tree 3 m. tall. fls.

bright coral pink outside,

paler pink inside, very

fragrant, with white hairs.

stipules small, green, erect

at first, soon strongly

recurved, strongly

carinate. leaves green,

only petioles slightly

reddish.



May 17 - 7 mi. n.e. of  
Fusagasuga, below Aguabonita,  
on road to Bogotá, Cundinamarca  
2450 m.

steep wooded slope  
Ladenbergia undata

20552

14 53 Ladenbergia undata

5 54 Palicourea

May 17, just below San  
Miguel (by summit of ~~San~~  
road bet. Bogotá & Fusagasuga)  
above Aguabonita, 10 km.  
n.e. of Fusagasuga, Cundinamarca  
steep brushy slope 2650 m.  
below road.

10 55 Cinchona ~~officiinalis~~ pubescens

| Anal. Bellis |      |
|--------------|------|
| A+C          | 1.00 |
| Li           | 1.00 |
| gum          | 0.25 |
| fl. 7        | 2.6  |

slender tree 10 m. tall,  
fls. white, fleshy,  
very fragrant.

Tree 10 m. tall, flowers  
white, fleshy, fragrant,  
fruits club-shaped,  
both immature and old.  
weak shrub 3 m. tall,  
fruit mostly immature,  
ripe ones blue-black.

tree 1 m. thick, 20 m. tall,  
portions of trunk dead,  
stipules small, ciliate,  
green, at first erect, then  
recurved, containing gum  
between them when  
young; fls. ~~pink~~ coral  
pink outside, paler within,  
hairs on lobes white,  
flowers fragrant. leaves  
slightly rosate beneath.  
(bark sample)



166

1943 - Colombia - U.S.A., Virginia

20550

*Nertera granadensis*

steep brushy talus slope

57

*Centropogon ferrugineus*

steep brushy talus slope

58

*Fuchsia*

under trees

59

*Solanum*

climbing in trees

May 30 - Sleepy Hollow Road  
just north of Holmes Run,  
2 miles s. of Falls Church,  
Fairfax Co. Va. U.S.A. 85 m.  
Open fields alternating  
with patches of second  
growth woods.

60

*Gillenia trifoliata*

roadside, acid soil

61

*Lobelia spicata* var.

pasture, acid soil

Cund.

Fairfax Co.

167

prostrate, fruit bright  
red, fleshy, fls. pale green.  
sprawling suffrutescent  
herb, corolla scarlet  
without, orange within,  
staminal column greenish-  
red. - 1 lb. - 1.5 m. high;  
leaves

Date 1948  
Coll. F.R. Fosberg No. Alt.  
Remarks m. (estimated)

Occurrence

Locality

Det.

HONOLULU

PLANTS OF THE HAWAIIAN ISLANDS

Oahu

calyx dark red, petals white  
erect, fls. pale lavender



166

1943 - Colombia - U.S.A., Virginia

20556

*Nertera granadensis*

steep brushy talus slope

L. 57

*Centropogon ferrugineus*

steep brushy talus slope

58

59

M

0

7

0

2

growth woods.

60

*Gillenia trifoliata*

roadside, acid soil

61

*Lobelia spicata* var.

pasture, acid soil

road  
un,  
rch,  
85 m.

Cund.

Taurfax G.

167

prostrate, fruit bright  
red, fleshy, fls. pale green.  
sprawling suffrutescent  
herb, corolla scarlet  
without, orange within,  
staminal column greenish-  
" anthers purple;

Date / / 1993 Alt. m.  
Collected by F. R. and V. O. Forberg  
DET. No.

Remarks

Habitat

Loc.

Plants of the Hawaiian Islands

OAHU

calyx dark red, petals white  
erect, fls. pale lavender



166

1943 - Colombia - U.S.A., Virginia

20556

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57

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58

59

60

growth woods.

60

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roadside, acid soil

61

*Lobelia spicata*

pasture, acid soil

Road  
side,  
acid soil,  
85 m.

Cund.

Taurfax Co.

167

prostrate, fruit bright  
red, fleshy, fls. pale green.  
sprawling suffrutescent  
herb, corolla scarlet  
without, orange within,  
staminal column greenish-  
yellow, anthers purple;  
latex scanty. leaves  
fruit green.

Date 1/193  
Collected by F. R. and V. O. Fosberg  
DET. No.

Habitat  
Remarks

Oahu

Plants of the Hawaiian Islands

2,  
erect,  
fls. scarlet.  
e.

calyx dark red, petals white  
erect, fls. pale lavender



166

1943 - Colombia - U.S.A., Virginia

20556

*Nertera granadensis*

steep bushy talus slope

L 57

*Centropogon ferrugineus*

steep bushy talus slope

58

59

60

61

*Lobelia spicata* var.  
pasture, acid soilroad  
cut  
arch,  
85 m.  
H

Cund.

Tampax Co.

167

prostrate, fruit bright  
red, fleshy, fls. pale green.  
sprawling suffrutescent  
herb, corolla scarlet  
without, orange within,  
staminal column greenish-  
yellow, anthers purple;  
latex scanty. leaves  
rugose. fruit green.dent,  
erect.  
ls.

Plants of the Hawaiian Islands

OAHU

Loc.

Habitat

Remarks

Date

1/193

Alt. m.

Collected by F. R. and V. O. Fosberg

DET.

No.

calyx dark red, petals white  
erect, fls. pale lavender



166

1943 - Colombia - U.S.A., Vingeis

20556

*Nertera granadensis*

steep brushy talus slope

L.

57

*Centropogon ferrugineus*

steep brushy talus slope



road  
cut  
arch  
35 m.  
up  
H

60 1/2

61 *Lobelia spicata* var.  
pasture, acid soil

Cund.

Tampas G.

167

prostrate, fruit bright  
red, fleshy, fls. pale green.  
sprawling suffrutescent  
herb, corolla scarlet  
without, orange within,  
staminal column greenish-  
yellow, anthers purple;  
latex scanty, leaves  
rugose. fruit green,  
subglobose  
scandent shrub,  
inflorescences pendent,  
hypanthium + calyx  
flesh pink, corolla scarlet.  
herbaceous vine, fls.  
white, fruit blue.

calyx dark red, petals white  
erect, fls. pale lavender



166

1943 - Colombia - U.S.A., Virginia

20550

*Nertera granadensis*

steep brushy talus slope

L. 57

*Centropogon ferrugineus*

steep brushy talus slope

58

*Fuchsia*

under trees

59

*Solanum*

climbing in trees

May 30 - Sleepy Hollow Road  
just north of Holmes Run,  
2 miles S. of Falls Church,  
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Open fields alternating  
with patches of second  
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*Gillenia trifoliata*

roadside, acid soil

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pasture, acid soil

Cund.

Fairfax Co.

167

prostrate, fruit bright  
red, fleshy, fls. pale green.  
sprawling suffrutescent  
herb, corolla scarlet  
without, orange within,  
staminal column greenish-  
yellow, anthers purple;  
latex scanty. leaves  
rugose. fruit green,  
subglobose  
scandent shrub,  
inflorescences pendent,  
hypanthium + calyx  
flesh pink, corolla scarlet.  
herbaceous vine, fls.  
white, fruit blue.

calyx dark red, petals white  
erect, fls. pale lavender



✓ Fontibon, Cundinamarca <sup>alt. 2576 m.</sup>  
wet roadside in the sabana July 6, 1943

✓ 20562 *Datura* ~~sp.~~  
common

~~63 *Cestrum*~~  
63 *Cestrum*

✓ 3 km. w. of Fontibon, Cundinamarca  
edge of yard near house <sup>alt. 2576 m.</sup>  
July 6, 1943

✓ 64 *Verbena*  
weed in yard

✓ 65 *Solanum*

✓ 66 *Labiata*

✓ 67 *Passiflora*

✓ 68 *Datura* ~~sp.~~

tree-like shrub 4 m. tall  
corolla yellow in middle,  
green at base, scarlet  
distally, pendent, almost  
cylindric. "borachero"

shrub 1.5 m. tall, fls.  
greenish yellow, fruits  
shiny, black, fleshy.

flowers bright purple.  
— used as remedy for typhoid.  
vine-like, climbing  
in bushes and on wall,  
fls. white, fruit green.  
— prostrate, aromatic.  
— used in making sauces.  
vine twining in shrubs,  
leaves fleshy, flowers  
— white.

small tree-like shrub  
5 m. tall, fls. white or  
cream-white, pendent,  
~~concrete~~ fruit pendent  
immature. "borachero"



170

Colombia 1943

with  
M. ValleronJuly 11 - Quebrada El Chico,  
above the northern extremity  
of Bogotá, Cundinamarca  
alt. 2800-3250 m.low bushy forest in <sup>steep</sup> ravine.

20569

Palicourea

2800 m.

70 Tournefortia

2800 m.

71 Cuphea ~~sp.~~  
bush along trail

2850 m.

72 Vallea stipularis

3000 m.

73 Solanum (or Laportea)

3100 m.

74 ~~Genl~~  
edge of clearing

3000 m.

75 Eupatorium  
edge of clearing

76 Weinmannia

3100 m.

77 ~~Flacourtia~~

3100 m.

78 ~~Passiflora~~

3100 m.

Cund.

171

shrub 3 m. tall, flowers  
greenish white, with  
green lobes, ~~which~~ which  
are erect, inflorescence  
drooping, fruit immature.shrub 2.5 m. tall,  
fls. white.weak shrub 0.5-1.5  
m. tall, 2 petals large,  
erect, deep purple.tree 8 m. tall, with slender  
drooping branches,  
fls. rose-pink. leaves  
somewhat glaucous  
beneath.

shrub 2.5 m. tall, fls.

white, fruits immature.

semi-scandent shrub  
forming thicket, fls.

deep yellow, fragrant.

shrubby tree 4 m. tall,

fls. white, anthers brown.

small tree, 5 m. tall.

small tree, 5 m. tall, others  
nearby up to 20 m., infl.

erect, flowers yellow.

shrub 3 m. tall



20577

in clearing

3100 m.

80

*Psychotria*

3000 m.

edge of clearing

81

*Viburnum*

3100 m.

82

*Arctostaphylos*

edge of clearing, common

83

*Solanum*

along trail

3200 m.

83a

*Fragaria*

open slope

3000 m.

July 11 - Paramo at head  
of quebrada El Chico, above  
the northern extremity  
of Bogotá, Cundinamarca

Open paramo

alt. 3300 m.

with bushy ravines and  
great limestone boulders,  
slopes moderate.

84

*Hypericum*

open slopes, common

85

*Hypericum*

open slopes

86

*Bartonia*

open slopes and crests, common

87

*Castilleja*

open slopes

88

*Pinguicula*

damp places

shrub 3 m. tall, spinose  
quite variable in same  
plant. ligules white,

filaments pink, anthers  
dark brownish-purple.

shrub 2 m. tall, flowers  
dark red.

small tree 5 m. tall,  
flowers white.

shrubby tree 4 m. tall,  
petals white.

shrub 2.5 m. tall,

flowers white, fruit green.  
flowers white.

erect, sticky, fls. yellow,  
leaves conspicuously  
4-ranked.

fls. yellow

erect, bracts and calyx  
deep purple, corolla pale  
yellow.

bracts and calyx scarlet  
distally, corolla green  
with lower edge yellow.

leaves with conspicuous  
stalked glands, flowers violet.  
leaves revolute.



- 20539 *Hypochaeris*  
 open slope, rare  
 90 open slope  
 91 *basella*  
 open slope, rare  
 92 *Melast.*  
 open slope  
 93 *Polygonum nepalense* Meisn. det. NCT  
 open slopes, common among  
 limestone boulders  
 94 *Jambouia*  
 under edge of limestone rocks  
 95 *Eupellitia grandiflora*  
 abundant on open slopes  
 96 *Gaiardendron*  
 wooded ravine  
 97 *Eupatorium*  
 wooded ravine  
 98 *Oxalis*  
 brushy ravine  
 99 *Rhynchospora*  
~~edge of~~ opening in ravine  
 20600 *Carex*  
 opening in ravine  
 01 *Hedyotis* ~~indulens~~  
 open slopes, common  
 02 *Heiracium*  
 open flat places

ligules white.

leaves distichous  
 scape red, fls. <sup>pale</sup> yellow  
 depressed shrub, fls.  
 whitish.

flowers yellow

decumbent, fls. pink.

grasses erect

stems red to 0.6 m. tall,  
 topped with a large  
 rosette, scapes  
 axillary, erect, flowers  
 yellow.

shrub 2.5 m. tall, flowers  
 white, petals spreading.  
 shrub 2 m. tall, fls. whitish

vine-like, climbing in  
 bushes, stems red, flowers  
 yellow.

culms spreading-ascending

loose tufts, culms spreading

low shrub, stature quite  
 variable, fls. white,  
 purplish outside.  
 fls. yellow



176

Colombia 1943

20604

Madia

open flat place

05

Madia

common in bushy places

06

Paepalanthus

common on open slopes

07

Bidens

in bush sheltered by boulder

08

Nertera granadensis

in opening in ravine

09

Lycopodium

open slope

10

Weinmannia

wooded ravine

11

Peperomia

wooded ravine,

12

Drimys

bush between great boulders.

July 12

✓

Neiva, Huila

470 m.

13

Jussiaea

weed in patio garden, ground not especially damp.

Cund Huila

177

rays yellow

shrub 2 m. tall,

fls. rose-pink.

caespitose, leaves stiff,

flowers white.

2.5 m. tall, weak, flowers

yellow.

prostrate, stiffness

of leaves seems to vary

with exposure, fruit

red, juicy.

main stems prostrate,

~~branches~~ erect

tree 7 m. tall, fls.

whitish.

stems fleshy

shrub 3 m. tall, leaves

white beneath, flowers

white, bark extremely

pungent to taste.

erect, virgate, 2.5 m. tall,

petals yellow, narrowly

obovate, acutish, 6 mm. long,

falling about noon.































Specimens collected by  
others for F.R.F.

*Ladenbergia magnifolia*  
bet. Mondomo and Pescador, on Popayan  
- Cali Highway, 43 km. n. of Popayan, Cauca  
1700 m. Mar. 16, 1943. F. C. Lehmann V.

*Cinchona pitayensis* Wedd.  
near Quintana, on Rio Las Piedras,  
30 km. s. s. of e. of Popayan, Cauca  
(bark sample 19) 2500 m.

Mar. 19, 1943 Matias Delgado  
"quina tuna"

*Cinchona pitayensis* Wedd.  
near Quintana, on Rio Las Piedras,  
30 km. s. s. of e. of Popayan, Cauca  
(bark sample 20) 2500 m.

fruits slightly immature  
Mar. 19, 1943 Matias Delgado  
"quina tuna"

*Cinchona pubescens* Vahl  
Buenavista, 6 km. s. of Popayan  
Cauca  
Apr. 17, 1943 Matias Delgado

*Cinchona pubescens* Vahl  
Chamisal 1 km. n. of Popayan  
Cauca  
April 17, 1943 Matias Delgado

*Cinchona pitayensis*  
Hacienda Ambashica, near Silvia,  
Cauca  
April 27, 1943 C. A. Caicedo

*Cinchona pubescens* Vahl  
Angelia, on the Huila-Caguana  
boundary directly south  
of Pitalito, Huila. 2500 m.  
July 15, 1943 A. Chajin  
stipules green, soon becoming  
strongly reflexed.

*Cinchona officinalis*  
Angelia, on the Huila-Caguana  
boundary directly south  
of Pitalito, Huila 3000 m.  
July 15, 1943 A. Chajin  
leaves somewhat glossy  
above, dull beneath,  
stipules light green,  
varying from blunt to  
pointed, fls. purple.

*Cinchona pubescens* Vahl  
Sabaneta, bet. La Vega  
& Facatativa, Cundinamarca  
July 25, 1943 Leon Knobelsdorf

*Remigia purdicana*  
Gomez, on railroad above Puerto  
Wilches, Magdalena Valley,  
Santander alt. 500 m.  
July 18, 1943 E. Bonetto







200







